सत्यमेव जयते

Report of the Comptroller and Auditor General of India on

Performance Audit of Select District Hospitals in Manipur

For the year ended 31 March 2019

भारतीय लेखापरीक्षा और लेखा विभाग INDIAN AUDIT AND ACCOUNTS DEPARTMENT

लोकहितार्थ सत्यनिष्ठा
Dedicated to Truth in Public Interest

GOVERNMENT OF MANIPUR

Report No. 1 of 2021

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PREFACE

This Stand Alone Report of the Comptroller and Auditor General of India containing the results of Performance Audit of Select District Hospitals in Manipur for the year ended 31 March 2019 has been prepared for submission to the Governor of Manipur under Article 151 of the Constitution of India.

District Hospitals are set up for providing a plethora of services for preventive, diagnostic and curative health care to the people in the district at an acceptable level of quality, and be responsive and sensitive to the needs of the people. The focus of the audit is to assess the role of the district hospitals in providing the envisaged health care services to the people in an affordable and timely manner and of the expected quality standards and norms

Audit has been conducted in conformity with the Auditing Standards issued by the Comptroller and Auditor General of India.

EXECUTIVE SUMMARY

Executive Summary

About the Report

The Report is about the Results of Performance Audit of Select Public Health facilities of tertiary care (Medical College & Hospitals), secondary care (District-level Hospitals), and primary care (one CHC and one PHC) in the State of Manipur. We covered the period from 2014-15 to 2018-19. The audit examination included records maintained in the office of the Commissioner & Secretary, Health and Family Welfare Department, Director of Health Services (DHS), Mission Director of National Health Mission (NHM). Besides, the audit also reviewed the offices of the Joint Director of Health Services (SS)/ Medical Superintendents of selected DHs, Senior Medical Officer/ Medical Officer of selected CHC and PHC.

What has been covered in this audit

In this Performance Audit we have focussed on patient care given by secondary and tertiary care levels in the State. We assessed the availability of basic infrastructure facilities in the State, adequacy of manpower in the selected DHs and various Services provided therein like Out-Patient and In-patient Services, Emergency Services, Drug Management, Infection Control, Bio Medical Waste Management, Diagnostic Services, Fire control measures *etc.* and select services of maternity and child care, Cancer and HIV/ AIDS, based on pre-determined performance indicators/criteria in the sampled hospitals. We have adopted the Indian Public Health Standards (IPHS) guidelines as prescribed by Government of India, which are a set of uniform standards envisaged to improve the quality of health care delivery in the countryas well as State norms as applicable for benchmarking various audit findings.

What have we found

We found significant areas for improvement in the healthcare needs of the people as highlighted below:

Financial Resources

Funds under State Budget

The budget allotment and expenditure of the Health and Family Welfare Department against the overall State Budget of the Government of Manipur during 2014-19, was ₹ 3282.62 crore (4.8 *per cent)* and ₹ 2740.71 crore (4.7 *per cent)* respectively. The National Health Policy, 2017 envisages allocation of at least eight *per cent* of the total budget of the State for Health Sector. The outlay and expenditure as a percentage of total budget and expenditure had declined during the period 2014-19 from 5.00 *per cent* to 4.51 *per cent* and 6.5 to 4.2 *per cent* respectively. The State could further improve and strengthen its overall expenditure on health as well as capital expenditure which was eleven *per cent* of the total health expenditure incurred during the period.

The Department did not utilise the allocated funds optimally in the five-year period 2014-19, with the savings ranging from ₹ 46.46 crore (seven *per cent*) in 2014-15 to ₹ 197.50 crore (29 *per cent*) in 2016-17 and ₹ 159.68 crore (20.63 *per cent*) in 2018-19. The Department spent only three and one *per cent* of the total revenue expenditure on procurement of drugs and equipment respectively.

Against the normative requirement of 2.5 *per cent*, State's expenditure on Health Sector as percentage of Gross State Domestic Product, declined from 3.18 *per cent* in 2014-15 to 2.27 *per cent* in 2018-19.

(Paragraph 2.1.1.1)

Funds under National Health Mission (NHM)

NHM Society failed to utilise the available funds in any of the years as the unspent balances ranged between ₹ 57 crore (31 *per cent*) and ₹ 97 crore (36 *per cent) of* the total available funds during 2014-19.

Under National Programme for Control of Blindness, National Vector Borne Disease Programme (NVBDCP) and Intensified Diarrhoea Control Fortnight (IDCF), they could spend only 37 *per cent*, 62 *per cent* and 57 *per cent* of the allocated funds respectively.

(Paragraph 2.1.3)

Recommendations

i. *The State Government may enhance the budget provision and expenditure on healthcare services to the expected level of 2.50 per cent of GSDP to ensure that adequate and quality healthcare infrastructure and services are provided to the people of the State.*

ii. *The Department needs to increase its spending under drugs and equipment.*

iii. *The State Government may ensure optimum utilisation of the funds available under NHM by implementing the various health programmes more effectively.*

Essential Resources Management

Shortage of doctors and nurses

The State had an overall shortage of 255 doctors against 355 sanctioned posts in the seven DHs, out of which, 170 (48 *per cent*) posts were lying vacant in the test-checked DHs as of March 2019. The vacant posts of doctors were 53 *per cent* in DH Chandel and Thoubal and 36 *per cent* in JNIMS.

There was shortage of specialist doctors in the selected DHs of Chandel (61 *per cent*) Thoubal (15 *per cent*) and JNIMS (48 *per cent*) impacting the range of services available to the public in these hospitals.

As regards staff nurses, when compared with the IPHS norms, the State had an overall shortfall of 72 nurses (27.17 *per cent*) in the seven DHs with Chandel

DH having maximum shortfall of 55 *per cent* followed by Churachandpur (30 *per cent*) and Bishnupur (17 *per cent*). Further, despite substantial increase in the number of registered OPD and IPD patients during the period in all the test-checked hospitals, neither the sanctioned strength of the medical and para-medical staff was revised to take care of the increasing patient load nor were the existing shortages in manpower of hospitals filled up.

The State had not taken any positive measures to incentivise doctors to serve in remote and hilly areas of the State.

(Paragraphs 3.1.1, 3.1.2 & 3.1.3)

Recommendations

i. *Keeping in view the fact that Health is a State subject, the State Government may come up with a policy and executive intent to address shortfalls in the Human Resources for the State Health Sector, to improve quality of health care.*
ii. *The State may take positive incentivising measures to address the reluctance of doctors and support staff to serve in the State Health facilities.*

Overall shortage of CHCs, PHCs and SCs

The State Government has established seven DHs; two Sub-District Hospitals, 17 CHCs; 95 PHCs; 421 Sub-Centres SCs; 20 State Dispensaries, three Urban Health Centres (UHCs) and two UPHCs. The Jawaharlal Nehru Institute of Medical Sciences (JNIMS) at Imphal, with an attached Medical College and 655 bedded hospital served as a DH and referral hospital for the State.

There was shortage of 150 SCs/ 71 CHCs across all the nine districts constituting a shortfall of 26.27 and 29.17 *per cent* respectively, underlining the need to improve the health infrastructure in the districts and villages

(Paragraph 3.2.2)

Recommendation

The State Government may ensure setting up of adequate number of SCs/CHCs so that universal accessibility to healthcare is provided to all sections of Society.

Blood Bank Facility

Blood Bank facilities were not available in DH Bishnupur and Chandel, whereas the Blood Bank at DH Thoubal did not have the requisite license. Patients' lives were therefore at a risk since they were required to travel distance of 20-60 kms. for blood requirements in emergency conditions.

(Paragraph 3.2.3)

Recommendation

Blood bank services be made available/operationalized in all DHs in keeping with IPHS norms. The licenses of DH Thoubal and other DHs be got renewed.

The ramp available in DH Churachandpur was for the OT located on the first floor accessible only through the corridors of the radiology department rooms. Thus, it was not easily accessible to the other users. No ramp was available for the OPD blocks located on the first floor of the OPD building and also for the medicine ward located on the first floor of the emergency building.

(Paragraph 3.2.4)

Recommendation

All DHs may be provided with easy access and ramp facilities for patients

Equipment for health facilities

There was shortage of full range of essential equipment in the test-checked DHs in comparison to the IPHS norms. In seventeen sampled categories of equipment required by the four test checked DHs and JNIMS, the availability of equipment ranged from 47 *per cent* (JNIMS) to 31 *per cent* (DH Chandel).

(Paragraph 3.3)

Recommendations

i. *State Government may ensure availability of full range of essential equipment in every hospital, particularly in view of the increasing reliance on diagnostics for treatment of patients. They may ensure that the equipment is functional and available for use.*

ii. *State Government may utilise the available NHM funds to provide wanting diagnostic services.*

Shortages in availability of essential drugs

Many essential drugs were not available in the sampled DHs and even after being requisitioned by the DHs, they were not made available to them. There was no proper linkage between requirement of drugs at various health centres and the procurement done at the Directorate level and many instances of stock-out of drugs were noticed in selected DHs.

The State did not have any laboratory facility for testing of drugs.

(Paragraphs 3.4.1 & 3.4.2)

Recommendations

i. *The State Government may put in place a comprehensive drug policy according to the need of hospitals and increase their spending on drugs.*

ii. *They may revisit the procurement process of drugs to ensure availability of essential drugs in each hospital in order to avoid 'stock outs'.*

iii. *Drug Testing should be taken seriously and the Government may ensure setting up at least one Drug Testing laboratory in the State considering its geographical distance to avail these facilities from other States.*

Delivery of Healthcare Services

OPD Services

The average patient load per counter per hour in Churachandpur, Bishnupur and JNIMS was 38, 42 and 43 respectively as against the norm of 20 patients per hour for registration. The Out-patient Department of the test-checked district hospitals had various shortcomings in availability of basic facilities like portable drinking water, online registration, in-adequacy of suitable seating facility, *etc.*

(Paragraph 4.1)

Recommendations

i. *The State Government may ensure availability of basic facilities/services in the OPD of each hospitals as prescribed in the Assessor's Guidebook for Quality Assurance of Services in District Hospitals, 2013 (Vol-1).*

ii. *They may expedite implementation of e-Hospital system for improving service delivery to patients.*

iii. *They may coordinate with District administration for safe piped water facility at DH Chandel.*

IPD Services

Services for IPD were not comprehensive since General medicine, Ophthalmology, and Orthopaedics services were not available in DH Chandel. None of the sampled DHs provided dialysis service. Only DH Churachandpur had a Burns ward.

(Paragraph 4.2)

Intensive Care Unit Services

JNIMS provided ICU services while none of the selected DHs had an ICU. In the absence of ICU facility, patients approaching district hospitals in emergent and serious conditions were referred to /or passed on to the higher facility in public or private hospitals. DHs also could not perform major surgeries particularly those, which require the patient to be kept under observation in the ICU.

(Paragraph 4.3)

Operation Theatre Services

JNIMS provided all three i.e. major, minor as well as emergency OT services. While General OT was available in all four sampled hospitals but emergency services were provided to a limited extent due to lack of facilities as well as manpower.

(Paragraph 4.4)

Trauma and Emergency Services

Trauma Care Centre was not available at any of the DHs at the time of audit (March 2020). Emergency room was available in all test-checked DHs, however, Mobile X-ray and Ventilator were not available in any of the DH's

emergency room. Availability of equipment/facilities also varied from DH to DH. The non-availability of required facilities/equipment adversely impacted the emergency services provided to the patients in the DHs.

(Paragraph 4.5)

Diagnostic Services

X ray services were available in all sampled DHs whereas none of them had a working CT scanner or a CT scan technician. None of the DHs had dental x-ray service for want of either dental x-ray machine or technician despite having a functional Dental Department. DH Thoubal and DH Chandel did not provide ultrasound services for want of technician in spite of equipment being available. Out of 97 Diagnostic Services/ Tests to be ensured at DHs, the no. of available Diagnostic Services/ Tests at the sampled DHs ranged from 35 to 76, compromising on the quality of health services offered to the patients. Tests for Respiratory ailments were not available in the sample hospitals while endoscopy services were available only in JNIMS depriving the public of these services in the DHs.

(Paragraph 4.6)

Recommendations

i. *OT services be made available in all the DHs with required manpower, equipment and drugs.*
ii. *The availability of round the clock accident and trauma services needs to be ensured as per the norms for DHs.*
iii. *The State Government may ensure availability of all the 97 tests prescribed under IPHS.*

Support Services

Storage of Drugs

The prevailing system of storage of drugs in the test-checked hospitals was not conducive for orderly storage and norms/parameters prescribed in the said Rules were not adhered to. No designated area was found earmarked for the controlled, dangerous and restricted medicines, stocked in DHs.

(Paragraph 5.1)

Infection Control

Sterilisation facility using boiling, autoclaving and chemical sterilisation was available in all test checked DHs. However, none of them undertook High Level Disinfection (HLD) process for disinfection/sterilisation. All the selected DHs had taken air and surface samples for checking microbial contamination in the OT.

(Paragraph 5.2)

Bio-medical waste management

Segregation of bio-medical waste (BMW) was done in all the test-checked district hospitals, and it was collected once a week from DHs except for DH Thoubal and JNIMS, where waste was collected every alternate day and on

daily basis respectively. The selected DHs had not established ETPs for pre-treatment of the liquid chemical waste, thereby posing a hazard to public health at large.

(Paragraph 5.3)

Recommendations

i. *Review storage of drugs at DHs as per norms for proper storage and retrieval of drugs.*

ii. *Effluent Treatment Plants may be constructed in all the hospitals on priority. The incomplete ETP at JNIMS may be got completed urgently.*

Maternal & Child Healthcare, Cancer and HIV/ AIDS Care

Maternal and Child Health

There were 1,97,383 live births, 66 maternal deaths and 466 infant deaths reported in the State during 2014-19 with IMR ranging between 9 to 12 during 2012-14 and 2016-18. None of the sample DHs except DH Churachandpur maintained the records of infant and maternal deaths. The percentage of pregnant women had opting for home deliveries declined from 20.0 *per cent* in 2014-15to 17.7 *per cent* in 2018-19. The percentage of post-partum check-ups to total institutional deliveries increased from 47 *per cent* to 63 *per cent* during the five-year period. The number of C-Section deliveries had also increased in all DHs during the period, posing a risk to the mother and child and also burdening the infrastructure available in the DHs.

(Paragraphs 6.1.1, 6.1.4& 6.1.5)

Post-natal care

Post Natal follow up care was not provided in DH Bishnupur and Chandel, adversely impacting the lives of high risk new born babies in these districts.

(Paragraph 6.1.6)

Pregnancy Outcomes

Huge mismatches were noticed in the figures uploaded in the HMIS with that of the actual records. None of the hospitals kept records of data being collected before uploading to HMIS. Eclampsia Room equipment for facilitating deliveries of babies in emergency conditions was almost non-existent in DH Chandel.

(Paragraph 6.1.9)

Maternal Health Services

Under Janani Shishu Suraksha Karyakram (JSSK), we noticed shortage of essential drugs and consumables for Intra-partum under Normal and C-section deliveries and for new-borns in all the sampled DHs. There was a shortage of drugs and consumables in all selected DHs whereas at DH Thoubal, essential drugs for C-Section deliveries were not at all available.

(Paragraph 6.1.11.1)

Recommendations

i. *The State Government may take steps to further improve the facilities available for safe deliveries of babies at the DHs in line with the MNHT guidelines*
ii. *The Department should provide actual figures in the HMIS and ensure that DH administration verifies the data before it is uploaded on HMIS.*

Cancer Care

The number of cancer cases detected in the State is 7,941 (Males: 3580, Females: 4361) during 2012-16. The number of cancer cases detected every year in the State was approximately around 1,500 during the five-year period with incidents of lung, stomach and nasopharynx cancer being the most. Three of the four sampled DHs, except DH Bishnupur, had been diagnosing cancer cases during the period test checked. However, cancer treatment was not uniform in all districts and necessitated referrals to Imphal facilities, making it difficult and time consuming for patients to travel in cases of prolonged illness.

(Paragraph 6.2.2)

Recommendations

i. *The State Government may take steps to post dedicated oncologists at each DH.*

ii. *The State Government may take steps to provide day-care chemotherapy centres at all DHs, so that pressures on referral hospitals for routine treatment of cancer are reduced.*

HIV/AIDS Care

The State had detected 5,875 cases with HIV during 2014-15 to 2018-19. In three out of four selected District Hospitals, only first line treatment medicines were provided at ART Centers except for DH Chandel where 1st and 2nd line treatment medicines were provided. No dedicated doctor was provided to ART center at DH Chandel.

(Paragraph 6.3.2)

Scarcity of ART drugs

Out of 20 types of drugs being supplied to the ART centres by the Manipur AIDS Control Society, there were shortage of 12 drugs during the period from 2014-15 till February 2020. Uninterrupted supply of drugs was not ensured to the ART centres resulting in shortage of drugs.

(Paragraph 6.3.3)

Recommendations

i. *The State Government may take up steps to post dedicated HIV/AIDS medical and paramedical staff at ART centres.*
ii. *The AIDS Society may take steps to provide adequate drugs at district ART Centres, by coordinating better with the Central depot for supply of ART medicines.*

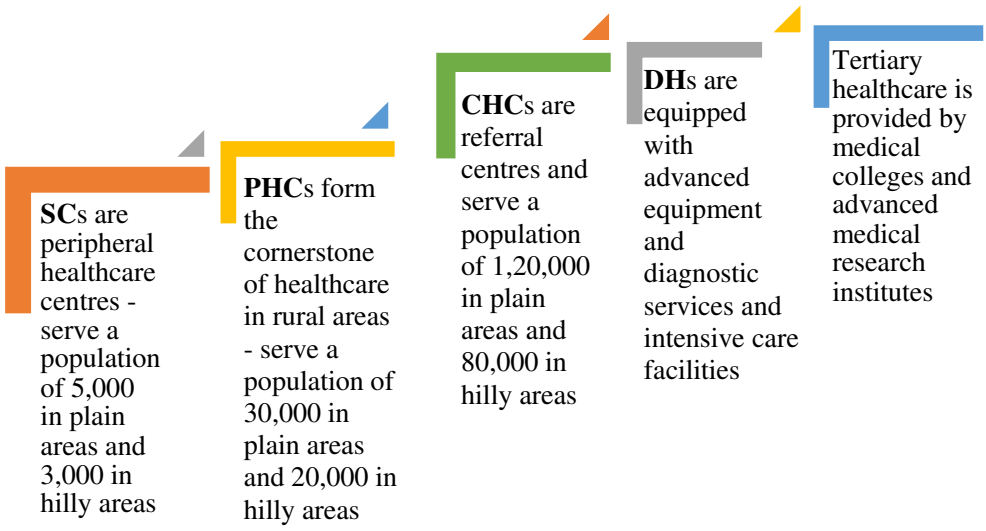
Chapter I
Introduction and Audit Framework

Chapter-I Introduction and Audit Framework

1.1 Introduction

Public healthcare delivery system in India is organised at three levels – primary, secondary and tertiary. The vast network of Sub-Centres (SCs), Primary Health Centres (PHCs) and Urban Primary Health Centres (UPHCs), and Community Health Centres (CHCs) form the primary tier for rural India. These health centres provide preventive and promotional services like immunisation, epidemic diagnosis, childbirth and maternal care, family welfare, *etc*. District Hospitals (DHs) serve as the secondary tier for rural population and as the primary tier for the urban population. These hospitals handle treatment and management of diseases or medical conditions that require specialised care. Tertiary healthcare involves providing advanced and super-speciality medical services by medical institutions in the urban areas which are well equipped with sophisticated diagnostic and investigative facilities. The ascending levels of healthcare facilities are shown in the following chart.

Chart 1.1: Healthcare services provided at different levels.

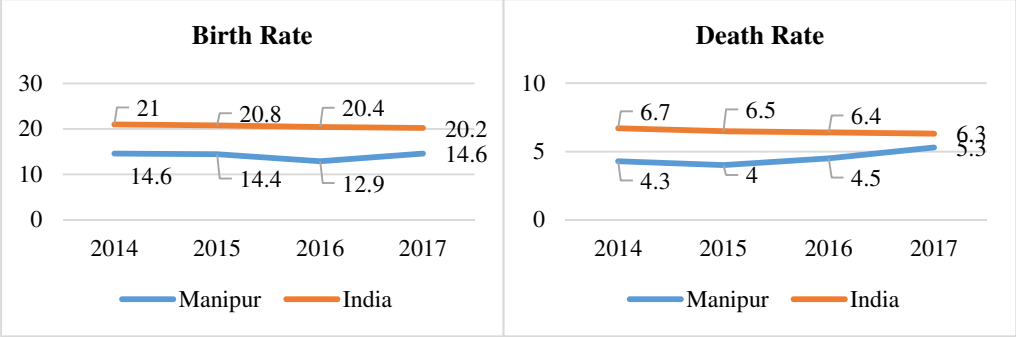


1.2 Overview of Public Healthcare Facilities in Manipur

The population of Manipur State was 28.56 lakh as per 2011 census. To cater to the healthcare services of its citizens at different level, the State Government has established seven DHs; two Sub-District Hospitals, 17 CHCs; 95 PHCs; 421 Sub-Centres SCs; 20 State Dispensaries, three Urban Health Centres (UHCs) and two UPHCs. The Jawaharlal Nehru Institute of Medical Sciences (JNIMS), Imphal with an attached Medical College and 655 bedded hospital serves as a DH and referral hospital for the State.

The graphic comparison between the State and National figures of Birth Rate and Death Rate during 2014-17 is given below:

Chart 1.2: Comparison of Birth rate and Death rate of Manipur with National average



Source: Ministry of Health and Family Welfare, GoI website.

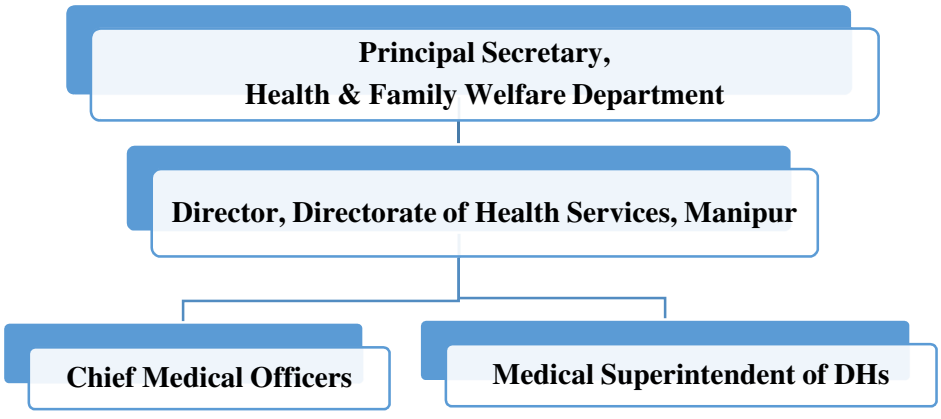
As per Sample Registration Survey[1] (SRS) Report 2014-17, Manipur scored lower than the National average in two main health indicators *viz.* Birth Rate and Death Rate during the period.

1.3 Accountability Structure for Healthcare in the State

At the apex level, district hospitals come under the purview of the Health and Family Welfare Department, which is responsible for policy formulation and oversight. At the organisational level, the Directorate of Health Services is responsible for implementation of the policy initiatives and developmental programmes relating to healthcare. At the Administrative level, the Chief Medical Officer (CMO) of the district is responsible for coordinating all the activities relating to healthcare services in the district. At the operational level, Medical Superintendent (MS) heads the district hospital and is directly responsible for functioning of the DH. However, the financial and administrative autonomy at this level (MS) is quite limited, with powers delegated only with regard to contingent and establishment matters.

The organisational set up of Health and Family Welfare Department of Government of Manipur (GoM) is given in the following chart:

Chart 1.3: Organogram of Medical Health & Family Welfare Department



[1] SRS is being conducted by the Registrar General and Census Commissioner of India, Ministry of Home Affairs for arranging, conducting and analysing the results of demographic surveys.

1.4 Audit Framework

1.4.1 Background

Healthcare services in the North Eastern Region (NER) are inadequate, in terms of the number of health facilities available, as well as the quality of facilities provided. The primary reasons for inadequacy of the health services are hilly and difficult terrain, inadequate budgetary outlay on health, absence of specialist doctors and other medi-care personnel and absence/ shortage of sophisticated diagnostic equipment, limited presence of private sector, *etc*. As per Government of India (GoI) (written statement of the Union Minister of State for Health & Family Welfare in Parliament), as of June 2019, the entire NER accounted for about 10 *per cent* (88 out of 851) of the District Hospitals available across the country. Manipur accounted for seven out of these 88 DHs (eight *per cent*).

The Comptroller and Auditor General of India (C&AG) has reviewed the Provision of Healthcare services by GoM, at periodic intervals. The C&AG had earlier (2015-16) reviewed the functioning of Primary Health Centres (PHCs) and Community Health Centres (CHCs) of the State. Key healthcare Institutes and Hospitals are also audited annually on a sample basis.

During 2019, the C&AG decided to carry out a Performance Audit of healthcare services being provided at District Hospitals across all the States to assess the availability of resources identified as essential by Indian Public Health Standards (IPHS) for District Hospitals and to evaluate the overall quality of healthcare services provided by these hospitals and in some selected domains.

1.4.2 Audit Domains

The following audit domains/ themes were identified for the Performance Audit of select District Hospitals:

Chart 1.4: Audit Domains

Resources	Line Services	Support Services	Auxiliary Services
• Manpower • Infrastructure • Equipment • Drugs • Consumables	• Out-patients • In-patients • Emergency • Operation & ICU • Laboratory & diagnostics	• Drug storage • Hygiene • Infection control • Ambulance • Power backup	• Patient rights • Patient safety • Referral services

1.4.3 Audit Objectives

In pursuance of the audit domains/ themes identified above, the objectives of carrying out a Performance Audit of select district hospitals were to assess whether:

a) adequate and essential resources - manpower, drugs, infrastructure, equipment, and consumables were available for effective functioning of the district hospitals;

b) timely and quality healthcare was delivered through line services like OPD, IPD, ICU, OT, trauma & emergency, *etc.* and diagnostic services;

c) support services like drug storage, sterilisation, hygiene, waste management, infection control, ambulance, power back-up/ UPS, *etc.* were aiding the line departments in providing a safe and sterile environment in the hospitals; and

d) adequate and timely healthcare services were available in selected services relating to maternal & infant care and specialities like cancer and HIV/ AIDS care.

1.4.4 Audit Criteria

Audit findings were benchmarked against the criteria sourced from the following:

- Indian Public Health Standards (IPHS) guidelines for DHs, (Revised 2012);
- National Rural Health Mission (NRHM)/ National Health Mission (NHM) Guidelines 2005 and 2012;
- National Quality Assurance Standards (NQAS) for District Hospitals;
- Assessor's Guide Book for Quality Assurance in District Hospitals 2013, GoI
- Maternal and Newborn Health Toolkit, 2013
- Indian Council of Medical Research (ICMR) on Hospital Infection Control Guidelines;
- Bio-Medical Waste (Management and Handling) Rules, 1998 & 2016;
- Government policies, norms, orders, circulars, budgets, annual reports, *etc*. related to healthcare.

1.4.5 Audit Scope and Methodology

Audit scope involved scrutiny of records for the period 2014-15 to 2018-19 in the offices of the Principal Secretary, Health and Family Welfare Department, Director of Health Services (DHS), Mission Director of National Health Mission (NHM). Besides, the audit also reviewed the offices of the Medical Superintendents of selected DHs, Senior Medical Officer/ Medical Officer of selected CHC and PHC.

We test checked records of the Department and the Directorate of Health Services to understand the policy initiatives, prioritisation of activities, funding and overall support. Field audit was carried out (November 2019 to March 2020) in selected district hospitals; health facilities and infrastructure were

physically inspected along with concerned hospital authorities to assess the quality of healthcare services being provided.

The benchmarks were with reference to NQAS for DHs. Data in Hospital Management Information System (HMIS) of the State was analysed and compared with the HMIS data at the hospital level. Samples were drawn from hospital level data and direct substantive checking was carried out to gain assurance about the integrity of data.

Photographic evidence was taken where necessary, to substantiate audit findings. Patient feedback was obtained through a structured questionnaire to gauge the extent and quality of healthcare services being provided by the sampled district hospitals.

An entry conference was held (14 August 2019) with the State Government wherein the audit objectives, scope, criteria, *etc*. were discussed and inputs of the Department were obtained.

Audit findings were reported to the Government in May 2020 and the written responses and responses during the Exit Conference (13 July 2020) have been suitably incorporated in the Report.

1.4.6 Audit Sample

There are seven District Hospitals in Manipur wherein two DHs are located in the valley districts while five DHs are situated in the hill districts. In order to have a representative sampling, the DHs were first stratified into hill and valley DHs. Thereafter, four DHs, two DHs each from both strata were selected out of the seven DHs for detailed scrutiny based on the number of patients in the district hospitals. The selected hospitals were:

i. DH Bishnupur

ii. DH Chandel

iii. DH Churachandpur

iv. DH Thoubal

In addition, Jawaharlal Nehru Institute of Medical Sciences (JNIMS) which is a Medical College and 655 bedded hospital, was also selected, as it discharges the role of a District Hospital for Imphal and was also a State referral Centre. Two health centres, CHC Sagolmang and PHC Lamlai falling within the Capital District were selected to assess the extent of referral services.

1.5 Acknowledgement

Office of the Principal Accountant General (Audit), Manipur acknowledges the cooperation extended by the State Government during the conduct of this audit.

1.6 Constraints

Due to the unexpected on-set of Covid–19 pandemic in early 2020, audit of one of the sampled units *viz*., JNIMS could not be taken up physically and facts,

figures and comments mentioned for JNIMS, are based on information provided by them (October 2020) as part of the replies to Audit requisitions (August 2020).

Chapter II
Financial Resources

Chapter-II Financial Resources

2.1 Fund Management

2.1.1 Fund allocation and utilisation

The Health & Family Welfare Department, Government of Manipur received funds from two main sources: (i) State budget, which also included funds from North Eastern Council (NEC) and (ii) Grants-in-Aid from GoI, under National Health Mission (NHM) with corresponding share of the State Government.

2.1.1.1 Funds under State Budget

National Health Policy (NHP), 2002 envisaged the State Governments to increase commitment to Health Sector up to eight *per cent* of their budget by 2010, while NHP, 2017 envisaged raising Public Health Expenditure to more than eight *per cent* of the budget by 2020. The overall budget allotment and expenditure of the State Government and of the Medical, Health and Family Welfare Services (Grant No. 11) during 2014-19 was as shown in the table below:

Table 2.1: Budget allocation and expenditure during 2014-19

(₹in crore)

Year	State		Health & Family Welfare Department	
	Budget Allocation	Expenditure	Budget Allocation (% of State budget)	Expenditure (% of State expenditure)
2014-15	12,478.55	8,884.61	624.50(5.00)	578.04(6.5)
2015-16	10,674.76	9,098.16	535.91(5.02)	485.66(5.3)
2016-17	13,826.17	10,852.06	677.06(4.89)	479.56(4.4)
2017-18	13,739.50	14,397.17	671.14(4.88)	583.13(4.1)
2018-19	17,153.31	14,590.22	774.01(4.51)	614.33(4.2)
Total	**67,872.29**	**57,822.22**	**3,282.62(4.84)**	**2,740.71(4.74)**

Source: Demands for Grants and Appropriation Accounts.

As can be seen from the above table, budgetary outlay on Health Sector in the State during the five-year period 2014-19 declined from 5.00 *per cent* of the State budget in 2014-15 to 4.51 *per cent* in 2018-19. Further, expenditure on Health Services declined from 6.50 *per cent* of total expenditure of the State in 2014-15 to 4.20 *per cent* in 2018-19. Thus, there was a decline in both the budgetary outlays as well as actual expenditure on health as a percentage of the total State Budget and Expenditure.

Out of the total expenditure of ₹ 2740.71 crore incurred on Health during 2014-19, the revenue expenditure constituted ₹ 2446.95 crore (89 *per cent*) while the capital expenditure was ₹ 293.75 crore (11 *per cent*). The Department did not utilise the allocated funds optimally in five year period 2014-19, with the savings ranging from ₹ 46.46 crore (seven *per cent*) in 2014-15 to ₹ 197.50 crore (29 *per cent*) in 2016-17 and ₹ 159.68 crore (20.63 *per cent*) in 2018-19.

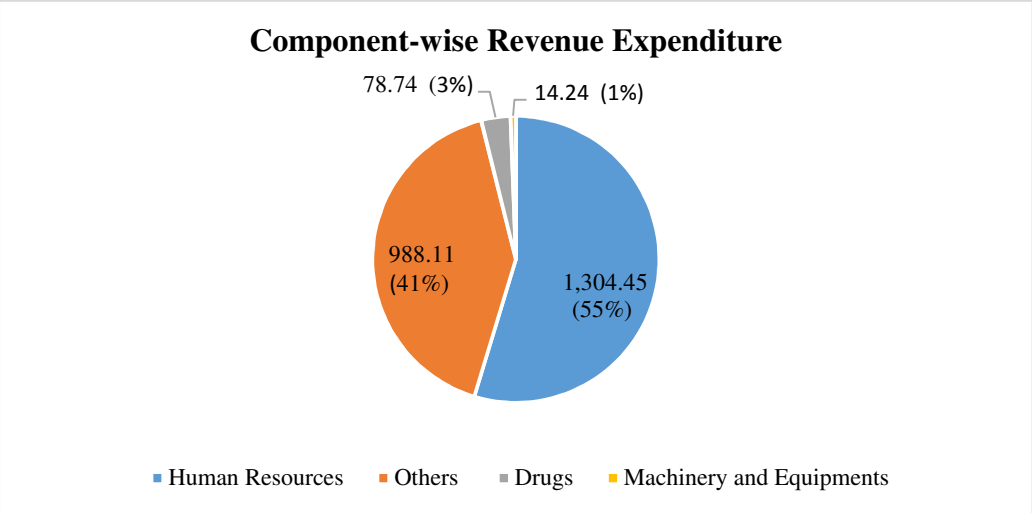
Further, NHP, 2017 stipulated that States increase expenditure on Health Sector to 2.5 *per cent* of Gross State Domestic Product by 2025. Against this

benchmark, the State's expenditure on Health Sector ranged between 2.27 *per cent* and 3.18 *per cent* during the period 2014-15 to 2018-19.

Revenue expenditure (component-wise) incurred by the Health Department during 2014-19 is presented in the following chart:

Chart 2.1: Component wise revenue expenditure during 2014-19

(₹in lakh)



Source: VLC data.

As can be seen from the chart above, 55 *per cent* of the revenue expenditure was incurred on human resources (Salary, Pensionary Charges *etc.*). Other expenditure, which constituted 41 *per cent* of the total Revenue Expenditure, included Grants-in-Aid (₹ 934.34 crore), Office Expenses (₹ 42.97 crore), Motor Vehicles (₹ 4.65 crore), *etc.* The Department spent only three and one *per* cent of the total revenue expenditure on procurement of drugs and equipment respectively.

Further, the Department failed to utilise ₹ 9.99 crore out of the total budget provision of ₹ 88.73 crore for procurement of drugs during the period 2014-19. However, the Department incurred expenditure in excess of the budget provision of ₹ 13.29 crore for procurement of equipment during the period 2014-19 as detailed in the following table:

Table: 2.2 Budget and Expenditure for Drugs and Equipment during 2014-15 to 2018-19

(₹in lakh)

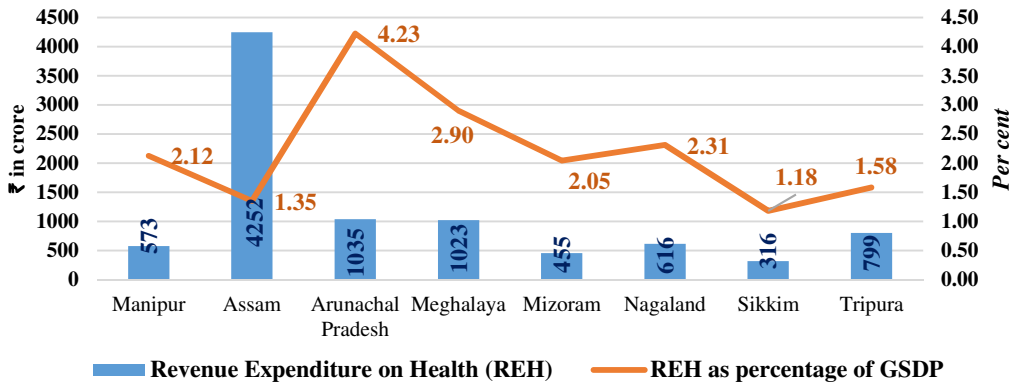
Particulars		2014-15	2015-16	2016-17	2017-18	2018-19	Total
Drugs	**Budget**	591.89	696.52	1021.60	2345.25	4217.24	8872.50
	Expenditure	570.47	418.54	411.07	2977.11	3496.58	7873.77
	Excess(+)/ Savings(-)	(-)21.42	(-)277.98	(-)610.53	(+)631.86	(-)720.66	(-)998.73
Equipment	**Budget**	101.45	122.45	483.99	126.23	495.23	1329.35
	Expenditure	102.86	30.59	0.53	847.41	442.16	1423.55
	Excess(+)/ Savings(-)	(+)1.41	(-)91.86	(-)483.46	(+)721.18	(-)53.07	(+)94.20

It is evident from the table above that the Department failed to utilise the entire budget provision during 2015-16, 2016-17 and 2018-19 for drugs as well as equipment.

2.1.2 Revenue expenditure on Health compared to other North Eastern States

In terms of revenue expenditure on Health during the financial year 2018-19, Manipur (₹ 573 crore) stood sixth after Assam (₹ 4,252 crore), Arunachal Pradesh (₹ 1,035 crore), Meghalaya (1,023 crore), Tripura (₹ 799 crore) and Nagaland (₹ 616 crore). However, when we compare the revenue expenditure on Health with GSDP, the position of Manipur (2.12 *per cent*) was better than that of Assam (1.35 *per cent*), Mizoram (2.05 *per cent*), Sikkim (1.18 *per cent*) and Tripura (1.58 *per cent*), as shown in the following Chart:

Chart 2.2 : Comparison of Revenue Expenditure on Health *vis-à-vis* GSDP of North Eastern States for the year 2018-19



Source*: *Statement 14 of Finance Accounts.

2.1.3 Funds under National Health Mission (NHM)

Based on the Approved State Programme Implementation Plans (SPIP), GoI sanctions funds under NHM to the State in the form of Grants-in-Aid and the same were released to the Mission Director, NHM, Government of Manipur (GoM). Year-wise position of receipt of funds and expenditure incurred there against during the five-year period from 2014-15 to 2018-19 is given in the table below:

Table 2.3: Receipts and expenditure under NHM during 2014-19

(₹in crore)

Year	Opening Balance	Grants from GoI	Other receipts	Available fund *[(4)+(5) +(6)]*	Total Expenditure	Unspent Balance(%age) *[(7)-(8)]*
(1)	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*
2014-15	**51.98**	143.79	50.64	246.41	175.94	70.47(29)
2015-16	70.47	167.80	60.21	298.48	213.19	85.29(29)
2016-17	85.29	75.81	23.07	184.17	127.38	56.79(31)
2017-18	56.79	178.49	36.25	271.53	174.26	97.27(36)
2018-19	97.27	215.62	53.93	366.82	301.87	64.95(18)
Total		**781.51**	**224.1**	**1,367.39**	**992.64**	

Source: Departmental Records.

As can be seen from the table above, the Mission Director, NHM failed to utilise the available funds in any of the years as the unspent balances ranged between 18 and 36 *per cent* of the total available funds during 2014-19. The Table showing NHM Health care programmes with less percentage of expenditure is as under:

Table 2.4: NHM Healthcare programmes with less percentage of expenditure during 2014-19

(₹in crore)

Programmes	Funds available	Expenditure	Unspent balance	Expenditure (% age)
National Vector Borne Disease Control Programme (NVBDCP)	23.59	14.82	8.77	62.84
National Programme for Control of Blindness (NPCB)	5.60	2.09	3.52	37.22
Intensified Diarrhoea Control Fortnight (IDCF)	0.61	0.35	0.26	57.35

Further, we noticed that the total expenditure under NPCB was only 37 *per cent* (₹ 2.09 crore) of the total available funds of ₹ 5.60 crore during 2014-19.

Conclusion

The budget allotment and expenditure of the Medical, Health and Family Welfare Services (Grant No. 11) against the overall State Budget during 2014-19 was 4.8 *per cent* and 4.7 *per cent* respectively even as the National Health Policy, 2017 envisaged allocation of at least eight *per cent* of the total budget of the State for Health Sector. The outlay and expenditure as a percentage of total budget and expenditure had declined during the period 2014-19. The State's capital expenditure was 11 *per cent* of the total health expenditure incurred during 2014-19 and the State could further improve their spending for strengthening/ providing adequate health infrastructure. The Department did not utilise the allocated funds optimally in the five-year period 2014-19, with the savings ranging from ₹ 46.46 crore (seven per cent) in 2014-15 to ₹ 197.50 crore (29 *per cent*) in 2016-17 and ₹ 159.68 crore (20.63 *per cent*) in 2018-19. The expenditure on drugs/ medicines and equipment was only three and one *per cent* of the revenue expenditure on Health during the period respectively.

Against the normative requirement of 2.50 *per cent*, State's expenditure on Health Sector as percentage of Gross State Domestic Product, declined from 3.18 *per cent* in 2014-15 to 2.27 *per cent* in 2018-19.

The Mission Director NHM did not spend the allocated funds adequately, with unspent balances ranging from 18 to 36 *per cent* of the total available funds during 2014-19. Under National Programme for Control of Blindness, only 37 *per cent* (₹ 2.09 crore) of the funds were spent.

Recommendations

i. *The State Government may enhance the budget provision and expenditure on healthcare services to the expected level of 2.50 per cent of GSDP to ensure that adequate and quality healthcare infrastructure and services are provided to the people of the State.*

ii. *The Department needs to increase its spending under drugs and equipment.*

iii. *The State Government may ensure optimum utilisation of the funds available under NHM by implementing the various health programmes more effectively.*

Chapter III

Essential Resources Management

Chapter-III Essential Resources Management

Adequacy of essential resources - Manpower, Drugs &Consumables, Equipment and Infrastructure for effective functioning of DHs

3.1 Manpower Resources

IPHS guidelines envisage that doctors and nurses should be available round the clock in IPD to provide due medical care to the in-patients. These guidelines also prescribed the minimum number of doctors and nurses to be available in different hospitals according to the number of sanctioned beds.

3.1.1 Shortage of Doctors in the selected DHs and JNIMS

Out of the total 525 sanctioned post of doctors in seven DHs of the State, the State had 270 doctors (51.43 *per cent*) posted in these DHs. Position of the availability of Doctors in the selected DHs and JNIMS is given in the following table.

Table 3.1: Table showing the status of availability of Doctors in the DHs and JNIMS

District Hospitals	Sanctioned Strength	Men in position	Shortfall (*percent*)
Bishnupur	70	40	30 (43)
Chandel	60	28	32 (53)
Churachandpur	116	66	50 (43)
Thoubal	109	51	58 (53)
Total	**355**	**185**	**170 (48)**
JNIMS	410	264	146 (36)

Source: Records of Hospitals *including specialists.

As seen from the above table, there was an overall shortfall of 170 doctors (48 *per cent)* against the total sanctioned posts of 355 in the selected DHs while the shortfall at JNIMS stood at 146 (36 *per cent*). DHs at Chandel and Thoubal had the highest *percentage* (53 *per cent*) of vacant posts of doctors amongst the selected DHs.

Substantial shortage of doctors (48 *per cent*) had an adverse effect on the quality and availability of essential services in the selected DHs as discussed in the Report.

3.1.2 Shortage of Specialists in the selected DHs and JNIMS

As per IPHS norms, DHs should have a minimum of two specialists each in Medicine, Surgery, Obstetrics & Gynaecology, Paediatrics and Anaesthesiology and one specialist each in Ophthalmology, Orthopaedics and Radiology.

Scrutiny revealed shortage of specialists in all the test-checked DH *vis-à-vis* IPHS norms as detailed in the following table:

Table 3.2: Availability of specialist doctors in selected DHs *vis-à-vis* IPHS norms

Name of the discipline	Requirement (100 beds)	Availability in DH				Sanctioned Strength#	Availability in JNIMS
		Bishnupur	Chandel	Cc'pur	Thoubal		
Medicine	2	0	0	2	1	32	18
Surgery	2	1	1*	2	1	35	15
Obs &Gynae	2	2	1*	2	2	25	12
Paediatrics	2	1	2	2	2	16	7
Anaesthesia	2	2	1	2	2	27	17
Ophthalmology	1	1	0	1	1	14	9
Orthopaedics	1	1	0	1	1	17	9
Radiology	1	0	0	1	1	17	8
Total	**13**	**8**	**5**	**13**	**11**	**183**	**95**

Source: Records of Hospitals.

** One specialist each in Surgery and Obstetrics & Gynaecology working as Medical Officers.*

 # IPHS norms are applicable to hospitals up to 500 beds and hence JNIMS manpower has been compared with Sanctioned strength only.

There were shortages in the posting of specialists in three of the four selected DHs. The shortage ranged between eight (61.5 *per cent*) in DH Chandel and two (15.38 *per cent*) in DH Thoubal as shown in the table above. There was no shortage of specialists in the above eight disciplines in DH Churachandpur. JNIMS being a tertiary hospital had a huge shortage of 88 (48.08 *per cent)* specialists.

The Department accepted the shortage of specialists in the selected DHs and stated in their reply that there are 399 MHS officers having PG qualifications and only 166 of them are specialists in core clinical specialties (Medicine, Surgery, Paediatrics, Obstetrics & Gynaecology, Orthopaedics and Anaesthesiology) in the State.

The other reason for shortage of specialists in the State is due to unwillingness of non-local doctors, completing their specialisation from these two Medical Colleges of the State i.e., Regional Institute of Medical Sciences (RIMS) and JNIMS, to join the Manipur Health Services. Also, there was one recruitment for 88 posts of specialists in 2015 and four major recruitments for medical officers during the years 2014-18. In the four recruitment drives for medical officers, 731 candidates were selected for appointment against the total advertised posts of 1,337.

Further, mushrooming of private hospitals in and around Imphal is also one of the major cause for migration of specialists from State Service. The Department needs to take serious incentivising measures to improve the availability of general and specialist doctors in the State services.

3.1.3 Shortage of nurses in the selected DHs and JNIMS

The IPHS envisaged the following nurse-bed ratio for a functional DH of different bed strengths; 45 nurses for 100 beds; 90 nurses for 200 beds; 135 nurses for 300 beds; 180 nurses for 400 beds and 225 nurses for 500 beds. Thus, the nurse-bed ratio should be 0.45:1.

We noted that out of the total 265sanctioned posts of nurses in the seven DHs of the State, the State had posted 193 nurses (72.83 *per cent)* in these hospitals. Further, there was an overall shortfall of nine *per cent* of nursing staff in the test-checked DHs as per IPHS norms. The hospital wise requirement of nursing staff and actual position (PIP) as per IPHS norms are presented in the following table:

Table 3.3: No. of functional beds, required No. of nurses, PIP and shortfall in the test-checked DHs

Sl. No.	District Hospital	No. of functional beds	Required No. of Staff Nurses*	SS	PIP as on 31.03.2019	Shortfall (*per cent*)	
						vs IPHS (4-6)	vs SS (5-6)
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1	Bishnupur	50	23	31	19	4 (17)	12(38.7)
2	Chandel	40	18	31	28	10 (55)	03(9.7)
3	Churchandpur	141	63	53	44	19 (30)	09(16.9)
4	Thoubal	100	45	52	40	5 (11)	12(23)
5	JNIMS	655	295	389	372	-	17(4.56))
	Total	**986**	**444**	**556**	**503**	**38(9)**	**53(10.53)**

Source: IPHS and records of test-checked DHs.
** As per IPHS norms @0.45 nurse per bed*

From the table above, it can be seen that DH Chandel had a maximum shortfall (55 *per cent*) of staff nurses followed by DH Churachandpur (30 *per cent*), DH Bishnupur (17 *per cent*) and DH Thoubal (11 *per cent*) when compared with IPHS norms.

With regards to comparing SS and PIP, DH Bishnupur with 38.7 *per cent* vacant posts was the highest followed by DH Thoubal (23 *per cent*), DH Churachandpur (16.9 *per cent*) and DH Chandel (9.7 *per cent*). JNIMS was better placed in respect of availability of nurses.

The shortage of nurses leads to poor quality of nursing care for the patients and adds to workload of existing nursing staff impacting safe and effective patient care.

3.1.4 Shortage of Paramedical Staff in the DHs in the selected hospitals

Position of the availability of Paramedical Staff in the selected hospitals is given in the following table.

Table 3.4: Status of availability of paramedical staff in the DHs

Staff	DH Bishnupur			DH Chandel			DH Churachandpur			DH Thoubal			JNIMS		
	SS	MiP	S	SS	MiP	S	SS	MiP	S	SS	MiP	S	SS	MiP	S
Lab Technician	4	9	0	4	3	1	7	6	1	7	13	0	92	92	0
Pharmacist	6	7	0	6	7	0	7	5	2	7	5	2	12	2	10
Storekeeper	0	0	0	0	0	0	0	0	0	1	1	0	20	0	20
Radiographer	1	0	1	1	1	0	2	3	0	3	2	1	15	9	6
ECG Technician	0	0	0	0	0	0	1	0	1	1	0	1	8	8	0
Ophthalmology Assistant	2	2	0	2	2	0	2	2	0	2	3	0	4	1	3
Dietician	0	0	0	0	0	0	1	1	0	1	1	0	2	2	0
Physiotherapist	1	2	0	0	1	0	1	2	0	1	4	0	2	2	0
OT Technician	0	4	0	0	3	0	1	2	0	2	10	0	12	15	0

Staff	DH Bishnupur			DH Chandel			DH Churachandpur			DH Thoubal			JNIMS		
	SS	MiP	S	SS	MiP	S	SS	MiP	S	SS	MiP	S	SS	MiP	S
CSSD[2] Assistant.	1	0	1	1	1	0	1	2	0	1	1	0	5	3	2
Total	**15**	**24***	**2**	**14**	**18***	**1**	**23**	**23**	**4**	**26**	**40***	**4**	**172**	**134**	**41**

Source: Records of Hospitals.

SS: Sanctioned Strength; MiP: Men-in-Position; S: Staff Shortage

**MiP is more than SS as it includes contractual staff*

From the above table, it is seen that sanctioned posts of ECG Technician, Dieticians, and Operation Theatre Technicians were not there in DH Bishnupur and DH Chandel though they were an essential requirement for providing quality services to the patients.

During Exit Conference (July 2020), the Department stated that the Department adopts the IPHS norms for the DHs. The Department also stated with regard to shortage of manpower/specialist doctors in the DHs that the Department is aware of the gaps in manpower and the reason for the shortage will be furnished shortly.

Shortage of specialists, doctors, staff nurses and paramedical staff has direct and adverse impacts on the number of patients dealt both in OPD and IPD as well as on the quality of service provided by DHs. The availability of services in the DHs is linked to the position of manpower. The absence of specialists in medicine in DH Bishnupur and DH Chandel has a significant impact on the functioning of the hospitals and also on the range of services provided to the patients. DH Bishnupur and DH Chandel which has lesser manpower were found to provide lesser healthcare facilities to the patients as seen in ***Paragraph 4.2.1*** of this Report regarding availability of In-Patient services. The two DHs also had lesser number of OPD and IPD patients amongst the sampled DHs.

3.1.5 Adequacy of Manpower in DHs

District Hospitals provide health and diagnostic services to a large number of patients in the State, besides performing surgical operations and other medical treatments for in-patients.

Audit analysed adequacy of manpower (Medical and para medical staff) *vis-à-vis* increase in the number of patients (both OPD and IPD) during the period 2014-19. The details are given in the following table:

Table 3.5: Adequacy of manpower *vis-à-vis* patient load in the test-checked DHs

Hospital	Number of OPD and IPD patients (*per cent* increase over previous year)					*Per cent* increase over 2014-19
	2014-15	2015-16	2016-17	2017-18	2018-19	
Bishnupur	41,387	42,704(3.2)	42,412 (-0.7)	47,772 (12.6)	46,986 (-1.6)	13.5
Chandel	9,048	9729 (7.5)	12,970 (33.3)	13,017 (0.4)	11,088 (-14.8)	22.5
Churchandpur	1,34,070	1,57,173 (17.2)	1,51,225 (-3.8)	143,015 (-5.4)	1,35,125 (-5.5)	0.79

[2] Central Sterile Services Department.

Hospital	Number of OPD and IPD patients (*per cent* increase over previous year)					*Per cent* increase over 2014-19
	2014-15	2015-16	2016-17	2017-18	2018-19	
Thoubal	81,225	90,111(10.9)	1,13,302 (25.7)	1,10,334 (-2.6)	1,02,401 (-7.2)	26.07
JNIMS	2,77,840	2,62,462(-5.53)	3,40,551 (22.93)	3,90,951 (12.89)	3,68,177 (-6.19)	32.51

Source: Information furnished by the hospitals.

It is evident from the table above that the patients registered at all the test-checked DHs showed an increase during the period 2014-19. The patient load at Bishnupur DH increased by 13.5 *per cent*, Chandel DH by 22.5 *per cent*, Churachandpur by 0.79 *per cent*, Thoubal DH by 26.07 *per cent* and JNIMS by 32.51 *per cent* over the period. Further, the average yearly increase in the patient load in the test checked DHs ranged between 0.4 and 25.7*per cent*.

Despite substantial increase in the number of patients in the test checked hospitals, the sanctioned strength of the medical and para-medical staff was not revised. Moreover, as discussed in ***Paragraph 3.1.1***, there was a shortage of 53 *per cent* doctors *vis-à-vis* sanctioned strength, in both Chandel and Thoubal DH. The increase in patient load over the period 2014-19 was 22 and 26 *per cent* in these two hospitals making the situation even more alarming.

Thus, increased patient load had put an immense pressure on the medical system and inadequate infrastructure thereby, adversely impacting quality of patient care and patient safety.

Conclusion

Human resources, an essential resource for hospital management, saw an overall shortage of 255 doctors in the seven DHs against the sanctioned posts of 525 doctors, while the shortage in the test-checked DHs stood at 48 *per cent* (170 doctors) *vis-à-vis* 355 sanctioned posts as of March 2019. The vacant posts of doctors were 53 *per cent* in DH Chandel and Thoubal and 36 *per cent* in JNIMS. As regards staff nurses, when compared with the IPHS norms, the State had an overall shortfall of 72 nurses (27.17 *per cent*) in the seven DHs with Chandel DH having maximum shortfall of 55 *per cent* followed by Churachandpur (30 *per cent*) and Bishnupur (17 *per cent*).

Further, despite substantial increase in the number of registered OPD and IPD patients in all the test checked hospitals, neither the sanctioned strength of the medical and para-medical staff was revised to take care of the increasing patient load nor were the existing shortages in manpower of hospitals filled up.

The State had not implemented any positive measures such as special /hill allowances, accommodation or any other incentives to address the reluctance of doctors, nurses and para medical staff to serve in DHs.

Recommendations

i. *Keeping in view the fact that Health is a State subject, the State Government may come up with a policy and executive intent to address shortfalls in the Human Resources for the State Health Sector, to improve quality of health care.*

ii. *The State may take positive incentivising measures to address the reluctance of doctors and support staff to serve in the State Health facilities.*

3.2 Physical Infrastructure

3.2.1 Availability of District Hospitals

District Hospital is a hospital at the secondary referral level responsible for a district. Its objective is to provide comprehensive secondary health care services to the people in the district at an acceptable level of quality and to be responsive and sensitive to the needs of the people and referring centres. Every district is expected to have a DH.

There are seven DHs in Manipur located in seven out of nine districts[3]. However, one medical college is present in each of the remaining two districts.

3.2.2 Shortage of CHCs, PHCs and SCs

As per IPHS, there should be a Sub-Centre (SC) for a population of 3000-5000, a Primary Health Centre (PHC) for 20000 to 30000 people and a Community Health Centre (CHC) as referral centre for every four PHCs covering a population of 80,000 to 1.2 lakh to ensure availability of health facilities.

Benchmarking 2011 census population with the above norms, Audit noticed shortage in number of Sub-centre and Community Health Centre in the State. The required number of health facilities, available facilities and shortfall thereof of three categories of healthcare service is as shown in the following table:

Table 3.6: Required number of health facilities, available facilities and shortfall thereof

Sl. No.	Particulars	Requirement	Availability	Shortfall	Shortfall percentage
1	Sub-Centre	571	421	150	26.27
2	Primary Health Centre	95	95	0	0.00
3	Community Health Centre	24	17	7	29.17

As can be seen from the Table above, the shortfall of SCs and CHCs was 26.27 and 29.17 *per cent* respectively. This indicated that the State Government needs to provide the required number of health infrastructure to its citizens, so as to further improve the Universal accessibility of health facilities.

3.2.3 Non-availability of blood banks

As per IPHS 2012, the blood bank service is an essential service that is to be provided by DHs.

As of December 2019, there were five licensed blood banks located at four districts in the State[4]. Out of nine districts in the State, five Districts did not

[3] Prior to 2016-17, there were nine districts in Manipur, presently there are 16 districts.

[4] Two blood banks at Imphal (West), one each at Imphal East, Churachandpur and Thoubal districts.

have blood banks[5].The availability of blood bank services in the sampled DHs is given in the following table.

Table 3.7: Availability of blood bank services in sample DHs

Hospital	Observation	Impact/Remark
DH Bishnupur	Blood Bank services are not available.	Required blood units are requested from other Hospitals.
DH Chandel		
DH Churachandpur	Blood Bank services are available but not round the clock. Licence is valid till December 2023.Blood Bank is supported by National AIDS Control Organisation (NACO). Only whole blood units are available. Component based blood units are not available.	24 x7Blood Bank services were not available. Only one Doctor and one Nurse are provided due to which 24x7 services cannot be provided.
DH Thoubal	Blood Bank services are available but not round the clock. License was valid till December 2018. License has not been renewed. Blood Bank is not supported by NACO. No blood tube sealer at the time of audit (Feb-2020). Only whole blood units are available. Component based blood units are not available. Only one Doctor and one Nurse are provided due to which 24x7 services cannot be provided.	Blood Tube sealer seals the tube of blood bag without causing haemolysis and leakage of blood.

DH Churachandpur and DH Thoubal had blood banks and transfusion services. DH Bishnupur has only a blood storage unit while DH Chandel has neither a blood bank nor a blood storage unit. When required, DH Chandel and DH Bishnupur acquired blood units from other hospitals.

Also, as per Para A-1.1 of Standards for Blood Banks & Blood Transfusion Services issued by NACO, all blood banks should be licensed by State Drug Controller and approved by Drugs Controller General (India) and should be regulated by Drugs and Cosmetics Act and rules there under. It was observed that DH Churachandpur had the required license from the State Licensing & Controlling Authority, Directorate of Health Services, GoM for running of the blood bank services and was NACO supported. However, the blood bank at DH Thoubal was a non-NACO supported blood bank and its license has not been renewed after December 2018.In the absence of such licensing, the safety of the blood transfusion services provided by DH Thoubal cannot be assured.

The availability of blood banks in each of the DHs becomes crucial in emergency conditions such as road traffic accidents where the requirement of blood can be immediate. Road traffic deaths and injuries are unpredictable and preventable. It is an accepted strategy of Trauma Care that if basic life support, first aid and replacement of fluids can be arranged within first hour of the injury (the golden hour), lives of many of the accident victims can be saved. Scrutiny of records of the Superintendent of Police of the above districts revealed that there were several road traffic accident (RTA) cases as shown in the following table.

[5] Senapati, Ukhrul, Chandel, Tamenglong and Bishnupur districts do not have blood banks.

Table 3.8: Availability of Blood Bank in DHs *vis-à-vis* emergency cases during 2014-19

District	Availability of Blood Bank services in the DH	RTA Cases	Domestic violence with injuries	Cases with injuries
Bishnupur	Blood Bank services are not available.	817	19	140
Chandel		25	0	7
Churachandpur	Blood Bank services are available.	49	12	34
Thoubal		819	37	300
	Total	**1,710**	**68**	**481**

Source: Records of DHs and District Superintendents of Police

The situation in the case of DH Bishnupur was more worrisome as DH did not have blood bank service and the number of emergency cases was very high in the district. Thus, patients needing emergency medical attention in Bishnupur and Chandel districts would have to travel to the nearest hospital with blood bank services, which are 20-60 km away from the DHs. Unavailability of blood bank services, could prove fatal in the case of emergency or trauma cases that need immediate intensive care services.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that the GoI has approved operationalisation of Blood banks in Bishnupur and Chandel DHs. In case of Bishnupur DH, they stated that Blood bank is almost complete and installation of equipment was pending.

3.2.4 Access to DHs

Obstruction-free access to the health facilities to both patients and hospital staff is an important element in ensuring smooth healthcare services. As per IPHS, for easy access to non-ambulant (wheel-chair, stretcher), semi-ambulant, visually disabled and elderly persons, infrastructure as per *"Guidelines and Space Standards for barrier-free built environment for Disabled and Elderly Persons"* of GoI, is to be provided.

Audit found that ramps to ensure easy access were available in all sample hospitals. However, the ramp available in DH Churachandpur was for the OT located on the first floor accessible only through the corridors of the radiology department rooms. Thus, it was not easily accessible to the other users. No ramp was available for the OPD blocks located on the first floor of the OPD building and also for the medicine ward located on the first floor of the emergency building.

Photograph 3.1: Faulty location of ramp in DH Churachandpur

Ramp was for OT located on 1st Floor and not easily accessible for others. (December 2019)

As the ramps are not easily accessible, patients are lifted through a nearby staircase. (December 2019)

Consequently, as evident from the photographs above, patients who could not walk had to be carried through a nearby staircase which is not only inconvenient to the attendants but unsafe for patients as well. This reflected on the poor design of the building and facilities.

In the Exit Conference (July 2020), the State Government acknowledged the audit observation and reiterated that it is potentially dangerous and necessary action would be undertaken for remedial measures. Action taken in this regard has not been informed to Audit till date (July 2020).

The overall obstruction free access has been found to be satisfactory in the sampled DHs. This is corroborated in the patient survey, where 81 (82.65 *per cent*) out of 98 respondents stated that lifts, wheel chairs, stretchers, ramps, *etc*. were available for specially abled.

Conclusion

Inadequate health system infrastructure, limits the access of health facilities and also contributes to poor quality of care and outcomes, particularly among vulnerable sections of society. The State did not have DHs in two of its districts, there was shortage of 150 SCs/ 71 CHCs across all the nine districts. Five out of nine districts did not have blood bank, thereby risking life of patients in emergency conditions. DH Churachandpur and Thoubal did not have round the clock availability of blood bank services.

Recommendations

i. *The State Government may ensure setting up of adequate number of SCs/CHCs so that universal accessibility to healthcare is provided to all sections of society.*

ii. *Blood bank services be made available in all DHs in keeping with IPHS norms.*

iii. *All DHs may be provided with easy access and ramp facilities for patients. The licenses of DH Thoubal and other DHs be got renewed.*

3.3 Equipment for Health Facilities

Indian Public Health Standards (IPHS) has prescribed norms of equipment for DHs under different categories based on the number of beds, keeping in view the assured services recommended for various grades of the DH.

Equipment is a very important component for providing assured service by the DHs. The IPHS norms stipulate list of equipment required for the delivery of assured service by DHs.

To ascertain the availability of essential equipment in the sample DHs, Audit examined the availability of essential equipment in DHs as per the Essential Equipment List prescribed by IPHS 2012 for DHs. It was observed that many essential equipment were not available in DHs. The summary of status of availability of essential equipment are tabulated below:

Table 3.9: Availability of essential equipment *vis-a-vis* IPHS norms in selected DHs

Type of equipment	Essential for 101-200 bed hospitals	DH Thoubal	DH Bishnupur	DH Churachandpur	DH Chandel	Essential for 301-500 bed hospitals	JNIMS
Imaging	4	4	3	3	3	7	6
X-ray Room Accessories	7	5	3	5	5	7	5
Cardiopulmonary	14	10	8	0	8	16	14
Labour Ward, Neo-natal	27	19	23	17	15	28	23
Special Newborn Care Unit (SNCU): General	11	5	0	5	0	11	11
Disinfection of SNCU	11	4	0	3	0	11	11
Individual patient care in SNCU	14	7	0	6	0	14	13
Immunisation	16	10	14	0	8	16	14
Ear, Nose, Throat	18	3	4	3	3	20	20
Eye	24	11	7	10	5	25	23
Operation Theatre	21	10	6	12	8	19	12
Laboratory	69	34	24	20	15	76	13
Surgical	43	12	11	20	19	53	0
PMR	30	1	0	1	0	30	0
Endoscopy	3	1	0	1	0	7	0
Anaesthesia	15	10	15	15	12	15	0
	327	**146**	**118**	**121**	**101**	**355**	**165**

Source: Records of DHs.

Against the IPHS norms of 327 essential equipment required in DHs, the shortage was most with 226 (69 *per cent*) in DH Chandel and least in DH Thoubal with 181 (55 *per cent*). JNIMS had better infrastructures with 165 out of 355 types of equipment available.

Lack of essential equipment in DHs meant deficient diagnostic and poor quality of healthcare services to the patients which not only made patients spend more from their pockets on visiting private clinics or diagnostic centres, it also put a question mark on the service delivery of DHs.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that non-availability of equipment and consumables were mainly due to financial constraints and also stated that it looked forward to address the issue with NHM funding. The Department also stated that they will initiate free X-Ray services in 42 public health facilities based on patient load and other criteria and free CT Scan services in DH Churachandpur and DH Thoubal due to high patient loads in the two DHs. The reasons put forward by

the Department are factually incorrect as it failed to utilise the allocated funds in three out of the five years, as detailed in ***Paragraph 2.1.1.1***.

Conclusion

There was shortage of full range of essential equipment in the test-checked DHs in comparison to the IPHS norms. The percentage in terms of availability of seventeen sampled categories of equipment required by the four test checked DHs and JNIMS ranged from 47 *per cent* (JNIMS) to 31 *per cent* (DH Chandel).

Recommendations

i. *State Government may ensure availability of full range of essential equipment in every hospital, particularly in view of the increasing reliance on diagnostics for treatment of patients. They may ensure that the equipment are functional and available for use.*

ii. *State Government may utilise the available NHM funds to provide wanting diagnostic services.*

3.4 Drugs Management

3.4.1 Shortages in availability of essential drugs

The State has prescribed 445 drugs in its Essential Drugs List (EDL). IPHS has also prescribed a list of drugs for delivery of minimum assured services in the DHs. To ascertain the availability of essential drugs in the sampled hospitals, audit kept the Essential Drugs List prescribed by IPHS 2012 for DHs in view while examination. It was found that the procurement of drugs is done centrally in the Directorate and the DHs requisition drugs according to their requirements. Audit observed that despite availability of funds as pointed out in ***Paragraph 2.1.1.1***, many essential drugs were not available in the sampled DHs and even after being requisitioned, were not made available to the DHs. There was no proper coherent linkage between requirement at various health centres and the procurement done at the Directorate level. Many instances of stock-out of drugs even after being requisitioned were noticed. Summary of status of availability of essential drugs and period of stock-out of drugs are given below:

Table 3.10: Availability of essential drugs and period of stock-out of drugs

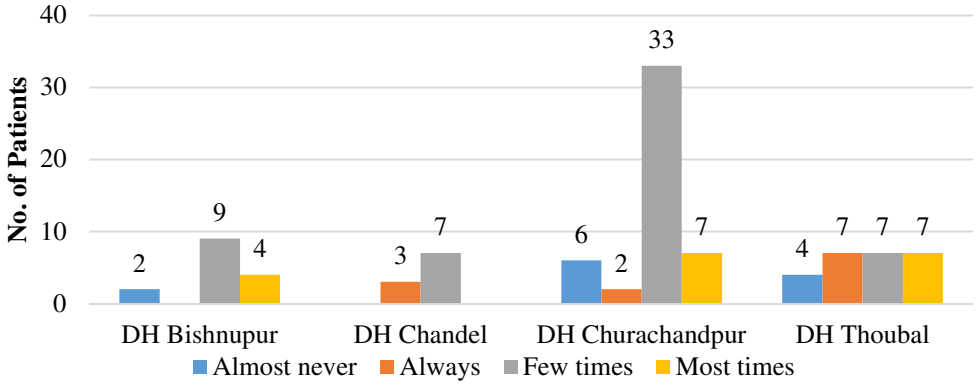
Name of DHs	Total no. of essential drugs	No. of available drugs	Minimum period of stock-out	Maximum period of stock-out
DH Bishnupur	505	128	0.5 month	69.5 months
DH Chandel		74	2 months	23 months
DH Cc'pur		63	0.5 month	41.5 months
DH Thoubal		43	0.5 month	64.5 months
JNIMS		77	-	-

Source: Records of Hospitals.

The non-availability of drugs is also corroborated by the fact that 68 out of 98 respondents (69 *per cent*) covered in the patient survey had replied that drugs

were either available only few times or almost never as shown in the following chart.

Chart 3.1: Availability of prescribed medicines and drugs in the hospital



The shortage of essential drugs in DHs meant out of pocket expenditure for the patients as well as potential loss of precious time in buying and administering of these medicines in times of emergency. There is no surety that these medicines would be available in the nearby pharmacies causing inconvenience to the patients and their attendants. Thus, non-availability of essential drugs not only defeated the very purpose of having public funded health services in the State but also exposed the patients to risks of non- availability of drugs in case of emergencies.

During Exit Conference (July 2020), the Department stated that that there was partial non-availability of essential drugs due to lack of monitoring. The Department stated that it had followed a Free Drug Policy to ensure availability of essential drugs to patients and an IT platform called Drug and Vaccine Distribution Management System (DVDMS) for purchase, inventory management and distribution of various drugs, sutures and surgical items to various District Drug houses of State DHs up to the Sub-Centre level due to which the issue will be addressed in future.

With regard to procurement, the Department stated that drugs are procured centrally at the Directorate level after taking into account the requirement/ assessment of the drugs from the CMO level. The Department also stated in their reply (September 2020) that they received tenders for only 254 drugs from the suppliers/ firms when open tenders for procuring 445 essential drugs were called for by them. This also contributed to the shortfall of essential drugs in the hospitals. The Department further stated that they are considering revisiting the existing EDL through consultation with various stakeholders as per the need of the State to ensure that only drugs which are commonly prescribed are listed in the EDL.

3.4.2 Quality Control and Testing of Drugs

The State did not have any laboratory facility in the State for testing of drugs. However, drug samples were sent to Guwahati for testing. During the Audit period, all the samples sent for testing were certified.

Conclusion

During 2014-19, out of the 505 essential drugs, there were cases of 'stock out' of drugs for a period ranging from 0.5 to 69.5 months. The serious non-availability of essential drugs in the test-checked DHs, compelled the patients to purchase the prescribed medicines from open market out of their pocket.

Recommendations

i. *The State Government may put in place a comprehensive drug policy according to the need of hospitals and increase their spending on drugs.*

ii. *The Department needs to ensure optimum utilisation of funds allocated under drugs and equipment.*

iii. *They may revisit the procurement process of drugs to ensure availability of essential drugs in each hospital in order to avoid 'stock outs'.*

iv. *Drug Testing should be taken seriously and the Government may ensure setting up at least one Drug Testing laboratory in the State considering its geographical distance to avail these facilities from other States.*

Chapter IV
Delivery of Healthcare Services

Chapter-IV Delivery of Healthcare Services

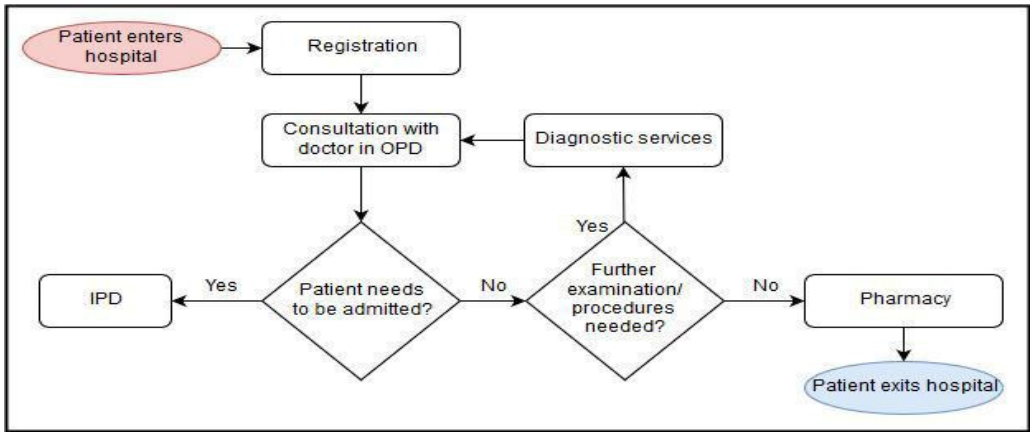
Delivery of OPD, IPD, ICU, OT, Trauma & Emergency, and Diagnostic services

High-quality healthcare services involve the right care, at the right time, responding to the users' needs and preferences, while minimising harm and wastage of resources. Quality healthcare increases the likelihood of desired health outcomes. Audit observations on delivery of timely and quality healthcare services in the test-checked DHs through line services like Out-Patient Department (OPD), In- Patient Department (IPD), Intensive Care Unit (ICU), Operation Theatre (OT), Trauma & Emergency and Diagnostic services are discussed in the succeeding paragraphs.

4.1 Out Patient Department (OPD) Service

To avail of services in a hospital, patients first register at the registration counter of the hospital. OPD doctors then examine them, and further diagnostic tests are prescribed, where necessary, for evidence based diagnosis and/or drugs are prescribed or admission in IPD is advised based on the diagnosis. The detailed process flow is shown in the chart below:

Chart 4.1 Flow of out-patient services



The following paragraphs discuss Audit findings pertaining to OPD services like registration, consultation, waiting time and other basic OPD facilities/ services in the test-checked DHs.

4.1.1 Registration Service in test-checked DHs

Registration counter is the first point of contact with the hospital for a patient and is an important component of hospital experience for patients and their attendants. The 'waiting time' at the Reception/Registration counter of a hospital play a vital role in developing trust in the quality of service medical treatment or diagnosis and long waiting time in hospital causes dissatisfaction among patients.

4.1.2 Inadequate Registration Counters

NHM Assessor guidebook (Vol.-I) estimates the average time required for registration to be 3-5 minutes per patient, which roughly works out to about 20patients/hour per counter.

Audit examined the number of patients registered during 2018-19 in each test-checked DH along with the availability of registration counter(s) and it was observed that the available registration counter(s) were inadequate in three DHs, *viz*. Thoubal, Churachandpur and Bishnupur as shown in the table below:

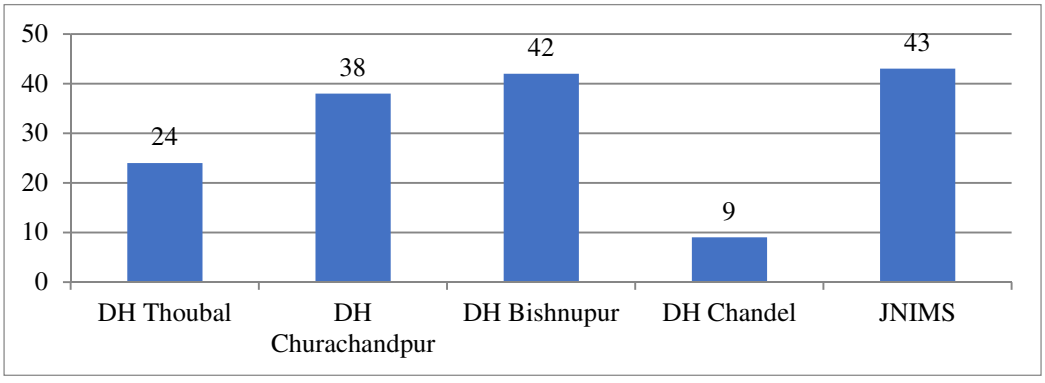
Table 4.1: Hospital wise No. of registration counters

Name of DH	Total No. of registered patients	OPD registration hours/day	No. of OPD working days during 2018-19	No. of required registration counters {2÷(4 x 3)}÷20	No. of counter(s) available	Shortfall
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
Thoubal	99,770	4	272	4	2	2
Churachandpur	1,23,062	4	272	6	3	3
Bishnupur	44,841	4	272	2	1	1
Chandel	9,241	4	271	1	1	0

Source: Records of Hospitals.

DH Churachandpur had the highest number of patients registered during 2018-19, followed by DH Thoubal. The following chart shows that the average patient load per counter per hour registered during 2018-19 of the test-checked DHs was higher than the ideal limit of 20 patients/hour for all test checked DHs except DH Chandel:

Chart 4.2: Average patient load per counter per hour in test checked DHs (2018-19)



Due to the high patient load per counter, the patients and their attendants had to spend extra time waiting for their turn to complete the registration. Such inconveniences become a source of dissatisfaction with the service delivery by DHs.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that the matter will be looked into. Action taken up in this regard has not been intimated to Audit till date (July 2020).

4.1.3 Waiting time

The 'wait time' for registration at the Registration counters and wait time between registration and consultation as per the response of 98 patients during Patient Satisfaction Survey conducted in the test-checked DHs is tabulated below:

Table 4.2: Waiting time for registration and between registration and consultation with the doctor in the test-checked DHs

(A) Wait time for registration

Name of DH	Available No. of registration counters	No. of Patients surveyed	Wait time in minutes		
			1-5	6-30	31-60
Thoubal	2	25	11 (44%)	12 (48%)	2 (8 %)
Churachandpur	3	48	10 (21%)	28 (58%)	10 (21%)
Bishnupur	1	15	12(80%)	3 (20%)	-
Chandel	1	10	3 (30%)	7 (70%)	-

(B) Wait time between registration and consultation with the doctor

Name of DH	No. of Patients surveyed	Wait time in minutes (*per cent* of patient surveyed)			
		1-15	15-30	30-60	60-120
Thoubal	25	18(72%)	3(12%)	2(8%)	2(8%)
Churachandpur	48	25(52%)	10(21%)	9(19%)	4(8%)
Bishnupur	15	10(67%)	0	3(20%)	2(13%)
Chandel	10	8(80%)	2(20%)	0	0
Total	**98**	**61**	**15**	**14**	**8**

Source: Patient's Satisfaction Survey report of test-checked DH.

As can be seen from the Table above:

- In Thoubal DH, out of 25 patients surveyed, 56 *per cent* waited for more than five minutes to get registered at the counters whereas the time taken to consult the doctors was more than 30 minutes in 16 *per cent* of the patients surveyed;
- In Churachandpur DH, out of 48 patients surveyed, 79 *per cent* of the patients waited for more than five minutes to get registered at the counters. The wait time between registration and consultation with the doctor was more than 30 minutes in 27 *per cent* of the patients surveyed;
- In Bishnupur DH, out of 15 patients surveyed, 80 *per cent* patients could get registered within five minutes whereas only 20 *per cent* waited for more than five minutes. The wait time after registration for meeting with the doctor was within 15 minutes for 67 *per cent* of the patients surveyed;
- In Chandel DH, out of 10 patients surveyed, 30 *per cent* waited for up to five minutes and 70 *per cent* waited up to thirty minutes for registration. The waiting time to consult a doctor was less than 30 minutes.

Thus, there was scope for further improvement of the waiting time for consultation by adding more doctors and registration staff.

4.1.4 Availability of basic facilities in OPD

The Assessor's Guidebook for Quality Assurance in District Hospitals, 2013 (Vol-1) envisages provision of basic facilities in the OPD areas for the patients. Facility-wise Audit observations in this regard are as follows:

Table 4.3: Audit observations on basic facilities in OPD

OPD facilities	Status
Availability of adequate/ suitable seating facility	The patient survey in which 59 out of 98 respondents (60.2 *per cent*) stated that adequate seating arrangements were available. However, 60 *per cent* respondents (six out of 10 respondents) in DH Chandel confirmed non-availability of adequate seating arrangements while all 15 respondents in DH Bishnupur stated that seating arrangements were inadequate.It was seen that adequate seating arrangement was not available in the DH Bishnupur and DH Chandel.
Drinking Water Facility	In the patient survey, 75 out of 98 respondents (76.53 *per cent*) stated that the drinking water facilities were available while the remaining 23 replied that they were unable to avail the same. Four out of 10 respondents (40 *per cent*) in DH Chandel and 16 respondents out of 25 (64 *per cent*) of DH Thoubal stated that they could not get drinking water. No drinking water facility was available in DH Thoubal and DH Chandel. In DH Chandel, due to the lack of piped water supply, tap water was made available by sourcing directly from the nearby river[6]without any treatment. Although bottled water was made available to patients, tap water inside the district hospital was utilised by those using the washroom facilities in the district hospital.
Washroom facility	In the patient survey, 90 (91.83 *per cent*) out of 98 respondents stated that washroom facilities are available at Reception/Registration/OPD area of the hospitals while eight (8.16 *per cent*) respondents stated washroom facilities are not available at Reception/Registration/OPD area of the hospitals.
Notice board and Signages	Inthe patient survey, 70 (71.42 *per cent*) out of 98 respondents stated that instructions on hospital Notice Boards were displayed in local language, 12 (12.24 *per cent*) out of 98 respondents stated that instructions on hospital Notice Boards were displayed partly in local language while 16 (16.32 *per cent*) out of 98 respondents stated instructions were not displayed in local language. Further, it was observed that signages were available in all the DHs as shown in the photograph for DH Chandel. 
Computerised Registration	e-Hospital was not found implemented in any of the test checked DHs. DH Churachandpur, DH Thoubal and JNIMS have adopted computerised system of offline registration of patients while the remaining two DHs were registering patients in a register.
Clinical history of the re-visit patients	Diagnosis/ clinical history of the re-visiting patients were not captured in computerised registration system/ register.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that appropriate steps will be taken up for operationalisation of e-Hospital in the near future which will invariably include online OPD registration.

[6] River Chakpi.

Conclusion

Three test-checked DHs namely Thoubal, Churachandpur and Bishnupur had inadequate registration counters as against the requirements and consequential overloading of patients at the registration counters. The average patient load per counter per hour in Churachandpur, Bishnupur and JNIMS was 38, 42 and 43 respectively as against the norm of 20 patients per hour for registration.

The Out-patient Department of the test-checked district hospitals had various shortcomings in availability of basic facilities like portable drinking water, online registration, in-adequacy of suitable seating facility, *etc.*

Recommendations

i. *The State Government may ensure availability of basic facilities/services in the OPD of each hospitals as prescribed in the Assessor's Guidebook for Quality Assurance of Services in District Hospitals, 2013 (Vol-1).*

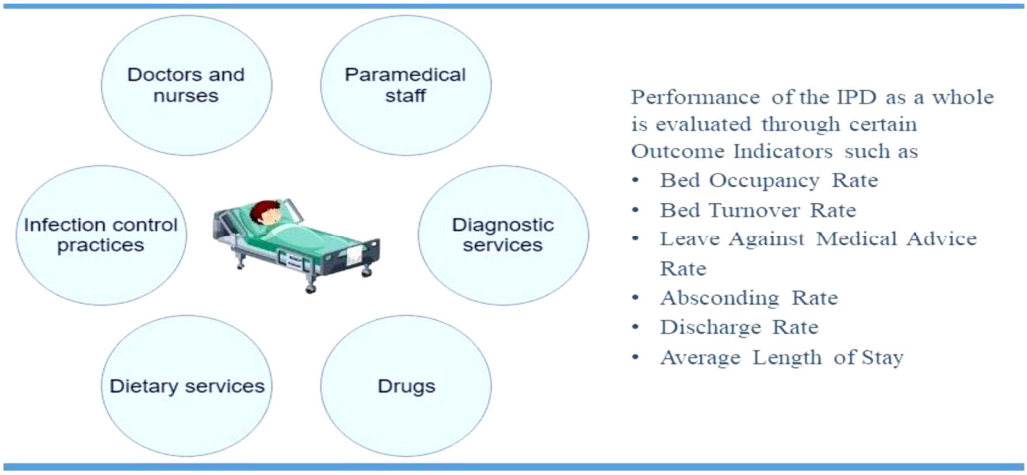
ii. *They may expedite implementation of e-Hospital system for improving service delivery to patients.*

iii. *They may coordinate with District administration for safe piped water facility at DH Chandel.*

4.2 In Patient Department (IPD) Services

IPD refers to the areas of the hospital where patients are accommodated after being admitted, based on doctor's/ specialist's assessment, from the OPD, Emergency Services and Ambulatory Care. In-patients require a higher level of care through nursing services, availability of drugs/diagnostic facilities, observation by doctors, *etc*.

Chart 4.3: **IPD services in a hospital**



4.2.1 Availability of IPD services in the test-checked DHs

As per NHM Assessor's Guidebook, a DH should provide specialist in-patient services pertaining to General Medicine, General Surgery, Dialysis, Ophthalmology, Orthopaedics, *etc.* We observed that most of the required services were, however, not available in the test-checked DHs as shown in the following table:

Table 4.4: Status of In-patient services in test-checked District Hospitals

Hospital	Act*	GM	GS	Burns	Oph	Dia	Orth	ENT	O & G	Psy	Phy
Thoubal	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Churachandpur	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
Bishnupur	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	No
Chandel	Yes	No	Yes	No	No	No	No	Yes	Yes	Yes	Yes

Source: Records of District Hospitals.

**Act: Accidents and Trauma, GM: General medicine, GS: General surgery, Oph: Ophthalmology, Dia: Dialysis, Orth: Orthopaedics, ENT: Ear, Nose & Throat O& G: Obstetrics & Gynaecology, Psy: Psychiatry, Phy: Physiotherapy.*

As evident from the table, while Accidents & Trauma, General surgery, Obs. & Gynaecology, ENT and Psychiatric services were available in all sample DHs, none of them provided dialysis service. Only DH Churachandpur had a Burns ward. Out of the 11 IPD services tabulated above, DHs at Thoubal and Churachandpur were doing best with nine services (81.81 *per cent*) available whereas DH Chandel was providing only six services (54.55 *per cent*).

As pointed out in ***Paragraph 3.1.2*** of this report regarding manpower, DH Chandel had shortage of specialists in medicine, ophthalmology and orthopaedics and hence the hospital could not provide inpatient services in Medicine, Ophthalmology and Orthopaedics.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that dialysis facility is now available in case of DH Churachandpur which was inaugurated in June 2020 while in case of the remaining DHs, the matter will be looked into to ensure early availability of dialysis in all the DHs. The Department also assured that a specialist in General Medicine will be posted at DH Chandel at the earliest.

4.2.2 Other findings related to IPD Services

4.2.2.1 Bed Occupancy Rate

The Bed Occupancy Rate is the average occupancy of hospital beds within a given year. It is an indicator of the productivity of the hospital services and is a measure of verifying whether the available infrastructure and processes are adequate for delivery of health services. As per IPHS, the BOR of hospitals should be at least 80 *per cent*. The BOR of the test-check DHs during 2014-19 is given below:

Table 4.5: BOR of the test-checked DHs

Sl. No.	Hospital	BOR (*per cent*)
1	DH Bishnupur	16
2	DH Chandel	15
3	DH Churachandpur	59
4	DH Thoubal	37
5	JNIMS	54

Source: Records of test-checked DHs.

Benchmark: 80 per cent

Audit found that the productivity of all selected DHs in 2018-19 was far below IPHS norm of 80 *per cent*. BORs of DHs at Bishnupur, Chandel and Thoubal were as low as 16 *per cent*, 15 *per cent* and 37 *per cent* respectively while that

of JNIMS was 54 *per cent*. Manpower is linked to service availability in the hospital. DH Churachandpur which has better manpower as shown in ***Paragraph 3.1*** of this report regarding manpower, has higher BOR compared to DH Chandel with shortage of specialists.

During Exit Conference (July 2020), the Department stated that cross-checking of data in case of DH Churachandpur is required as there is some non-conformity of data and the required information will be furnished from their side. The reply is not tenable as the data were furnished by the DH authorities concerned.

In case of the other DHs, the Department acknowledged the audit finding.

4.2.2.2 Patient survey finding relating to IPD services

Patient survey finding relating to IPD services are as follows:

Table 4.6: Patient survey finding relating to IPD services

Issue	Patient survey finding
Availability of doctor/ nurses	61 (78.2 *per cent*) out of 78 respondents stated that doctor/nurse for in-patients were always available round the clock, 16 (20.5 *per cent*) out of 78 respondents stated that doctor/nurse for in-patients were available most times while one (1.28 *per cent*) out of 78 respondents stated that doctor/nurse for in-patients were available sometimes only.
Explanation of follow up treatment on discharge	65 (98.48 *per cent*) out of 66 respondents stated that at the time of discharge of patient from the hospital the doctors explained to the patient/attendant about the follow up treatment and medication/diet while one (1.51 *per cent*) out of 66 respondents stated at the time of discharge of patient from the hospital the doctors did not explain to the patient/attendant about the follow up treatment and medication/diet.
Display of rates	In the patient survey, 16 (43.24 *per cent*) out of 37 respondents stated that it was always charged as per the displayed rate, six respondents (16.21 *per cent*) stated that many times it was charged as per the displayed rate, nine respondents (24.32 *per cent*) stated that sometimes it was charged as per the displayed rate while six respondents (16.21 *per cent*) stated that it was never charged as per the displayed rate.
Explanation of ailment, course, *etc.*	In the patient survey, 64 (65.3 *per cent*) out of 98 respondents stated that the patients were explained about ailment, cost, course and duration of treatment, 32 (32.65 *per cent*) out of 98 respondents stated that the patients were partly explained about ailment, cost, course and duration of treatment while two (2.04 *per cent*) out of 98 respondents stated that the patients were not explained about ailment, cost, course and duration of treatment.
Explanation of dosage	In the patient survey, 95 (96.93 *per cent*) out of 98 respondents stated that the patients were explained about dosage of drugs by the doctor/pharmacist while three (3.06 *per cent*) out of 98 respondents stated that the patients were not explained about dosage of drugs by the doctor/pharmacist.

Issue	Patient survey finding
Presence of touts/ middlemen	In the patient survey, three (3.06 *per cent*) out of 98 respondents stated that touts/middlemen who tried to charge money from the patient parties were always involved, two (2.04 *per cent*) out of 98 respondents stated that touts/middlemen who tried to charge money from the patient parties were involved many times, 10 (10.2 *per cent*) out of 98 respondents stated that touts/middlemen who tried to charge money from the patient parties were involved sometimes while 83 (84.69 *per cent*) out of 98 respondents stated that touts/middlemen who tried to charge money from the patient parties were never involved.

4.3 Intensive Care Unit Services

Intensive Care Unit (ICU) is essential for critically ill patients requiring highly skilled life-saving medical aid and nursing care. These include major surgical and medical cases such as head injuries, severe haemorrhage, poisoning, *etc*. ICU services in a District Hospital are essential for providing minimum assured services as per IPHS for DHs having more than 100 beds.

Audit observed that JNIMS provided ICU services while none of the selected DHs had an ICU. Thus, in the absence of ICU facility, patients approaching district hospitals despite being in an emergent and serious condition were likely to be referred and/or passed on to the higher facility public or private hospitals. As a result, patients with complications due to pregnancy, grievous road traffic accidents, burns, *etc.*, had to be referred to the State hospitals. In absence of ICU, DH also could not perform major surgeries particularly those, which require the patient to be kept under observation in the ICU.

Absence of ICUs in the sample DHs adversely affected the capacity of DHs to perform surgeries or to attend serious and emergency medical cases, thereby forcing patients to go to other medical facilities. This showed that the DHs did not adequately satisfy the medical requirements of the district population and fell short of achieving the objectives of the DH to provide intensive care services.

During Exit Conference (July 2020), the Department stated that ICU services are now available in case of DH Churachandpur with a capacity of four beds while in case of other DHs, appropriate action will be taken up to ensure early availability of ICU services in the DHs.

4.4 Operation Theatre Services

Operation Theatre (OT) is an essential service that is to be provided to the patients. IPHS guidelines prescribe OTs for DHs for performing elective major surgery, emergency surgery and ophthalmology/ENT (ear, nose and throat) surgery.

Audit found that JNIMS provided all three i.e. major, minor as well as emergency OT services. It was also found that General OT was available in all four sampled hospitals. Also, the minor OT which is used for treating of minor

injuries and dressing of cuts and wounds were available in the Emergency Department of all the sampled hospitals. Emergency OT services were provided in DHs but to a limited extent due to lack of facilities as well as manpower. This could have driven patients to the State Hospital as referral thereby further straining the resources of the hospital. During 2017-19, 281 and 1,042 patients were referred out by DH Chandel and DH Thoubal respectively to other hospitals.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that three OTs are available in DH Churachandpur and two OTs in DH Thoubal. In case of emergency situations, operations/surgeries are managed in these OTs. The Department also stated that major surgeries are routinely performed in the DHs including knee and hip replacement particularly in DH Churachandpur.

4.5 Trauma Care Centre and Emergency Services

Emergency services in DH are provided by Emergency ward or Emergency Room (ER) which is a medical treatment facility specialising in acute care of patients who come in emergency situation. Due to the unplanned nature of patient attendance, the Department provides initial treatment to a broad spectrum of ailments and injuries, some of which may be life threatening and require immediate medical attention. Therefore, IPHS envisages 24x7 operational emergency with dedicated emergency room in every DH.

None of the selected DHs has a functional Trauma Care Centre at the time of audit (March 2020). Emergency room was available in all test-checked DHs, however, the following deficiencies were noted as against IPHS norms:

As per IPHS, emergency room should preferably have a distinct entrance independent of the OPD's main entrance so that minimum possible time is lost in starting immediate treatment to casualties arriving in the hospital. However, DH Bishnupur had a common entrance as well as common registration counter for both OPD and Emergency cases.

IPHS also require the following equipment, facilities, *etc.* to be available in Emergency room. The availability of the facilities in test-checked DHs is shown in the following table:

Table 4.7: Availability of facilities in emergency room at DHs

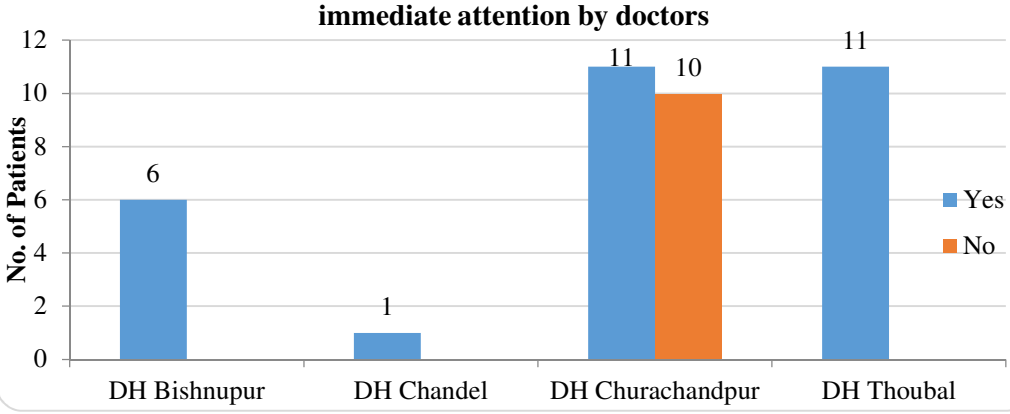
Sl. No.	Equipment/ Facility	Thoubal	Churachandpur	Bishnupur	Chandel
1	Mobile X-ray	No	No	No	No
2	ECG	Yes	Yes	No	Yes
3	Pulse Oxymeter	Yes	Yes	Yes	Yes
4	Cardiac Monitor with defibrillator	Yes	Yes	No	No
5	Multiparameter Monitor	Yes	No	No	No
6	Ventilator	No	No	No	No
7	Emergency Beds	Yes	Yes	Yes	Yes
8	Minor OT facilities	Yes	Yes	Yes	Yes

Source: Records of the test-checked DH.

From the Table above, it can be seen that Mobile X-ray and Ventilator were not available in any of the DH's emergency room. Availability of equipment/facilities also varies from DH to DH. The non-availability of required facilities/equipment can adversely impact the emergency services provided to the patients in the DHs.

In terms of patient care in emergency department, 29 out of the 39 respondents (74.36 *per cent*) covered under patient survey, who were admitted to the hospital in emergency condition stated that they were given immediate attention by the doctors. However, the remaining 10 respondents, all from DH Churachandpur, stated that they were not given immediate attention by the doctors as shown in the following chart.

Chart 4.4: Whether patients admitted in emergency were given immediate attention by doctors



Further, stretchers and trolleys were available in all sample DHs and this was also corroborated by the patient survey in which 36 out of 39 respondents (92.3 *per cent*) who were admitted in emergency cases confirmed the availability of stretchers and wheelchairs in the hospital.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that the matter will be looked into for early operationalisation of Trauma and Emergency Centre in all the DHs.

4.6 Diagnostic Services

Efficient and effective diagnostic services, both radiological and pathological, are amongst the most essential health care facilities for delivering quality treatment to the public based on accurate diagnosis.

4.6.1 Radiology services

The role of radiology is central to disease management for the detection, staging and treatment of diseases. Adequate availability of functional radiology equipment, skilled human resources and consumables are the key requirements for the delivery of quality radiology services.

Table 4.8: Availability of radiology services in test-checked DHs

District Hospital	X-Ray	Dental X-Ray	Ultrasonography	CT Scan
Thoubal	Yes	No	No	No
Churachandpur	Yes	No	Yes	No
Bishnupur	Yes	No	Yes	No
Chandel	Yes	No	No	No

Source: Records of District Hospitals.

X ray services were available in all sample DHs whereas none of them had a working CT scanner or a CT scan technician. The CT scanner at DH Churachandpur has been lying non-functional since 2011, inadequate maintenance of equipment impacted the efficiency and appropriate level of health care provided in the test-checked DHs Also, none of them had dental x-ray service for want of either dental x-ray machine or technician despite having a functional Dental Department. DH Thoubal and DH Chandel did not provide ultrasound services for want of technician in spite of equipment being available.

Ultrasonography is one of the basic services for prenatal care as it provides information about the health of the mother, growth of embryo or foetus and the progress of pregnancy. However, the DHs at Thoubal and DH Chandel, in absence of ultrasound services, deprived the expectant mothers of basic Antenatal Care (ANC).

Unavailability of Ultrasonography services not only caused inconvenience to the expectant mothers and other patients, it also impacted the quality and level of care offered in the sample DHs. Also, the patients had to incur more out of pocket expenditure while availing these services from private service providers.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that posting of right specialists will be done to make sure that radiology services are available in all the DHs. The Department also stated (September 2020) that the State will be institutionalising free X-ray services in 42 selected public health facilities based on the patient load and other criteria.

4.6.1.1 Lack of safety measures while providing X-Ray services

It is mandatory for all users of medical diagnostic x-ray equipment to obtain Licence for Operation from the Atomic Energy Regulatory Board (AERB) as per the Atomic Energy (Radiation Protection) Rules, 2004. Audit examination revealed that none of the sampled DHs had obtained the required license from AERB for their X-Ray Machines. Audit also observed that JNIMS had also not obtained the required license from AERB for their X-Ray machines and CT Scan machines (October 2020).

As per Rule 7(2)(e)(i) of AERB (Radiation Protection), all requirements relating to the safety for operation of a radiation installation, specified by the competent authority in the relevant safety codes and safety standards need to be satisfied in the construction of the radiation installation. In its absence, the safety becomes a major concern for the Radiology Technician and the patients who visit DHs for treatment.

Further, as per e-Licensing of Radiation Applications (eLORA) System Guidelines (July 2016), it is mandatory to provide every radiation worker with Thermo Luminescent Dosimeter (TLD). A TLD badge is used for personnel monitoring of beta and gamma doses of radiation workers. Such TLD badges have been provided to JNIMS technicians.

TLD badge

However, it was observed that such TLD badges were not provided to the technicians of the DHs (as of February 2020). Hence, the sample DHs had not only violated eLORA Guidelines, but also put the safety of technicians to risk.

The Department also stated (September 2020) that license for operation from AERB as per the Atomic Energy Rules, 2004 will be obtained after the State institutionalises free X-ray services in 42 selected public health facilities based on the patient load and other criteria. The reply is not acceptable as in the absence of a license, the safety becomes a major concern for the Technician as well as patients.

4.6.1.2 Other audit findings related to radiology services

Some other audit findings related to the radiology services in the sampled DHs were as under:

- **DH Chandel:** At the time of audit in February 2020, except for two days i.e. 28 January 2020 and 20 February 2020 when X-Ray service was provided, DH Chandel had no records maintained on X-ray service for the entire period of five years covered in audit.
- **DH Thoubal:** During June 2017 to April 2018, the X-Ray machines were out of order. Also, as per Standard Layout of X-ray installation recommended by eLORA System Guidelines, all walls of the X-ray examination room are to be 23 cm (9 inch) thick and made of bricks while the door is to be single leafed door with 2 mm lead lining. However, these design recommendations were not complied to and only a wooden door with glass ventilator separated x-ray room from the dark room creating safety concerns. Technicians fixed personal radiation protection kit on the wooden door to protect themselves while working inside the dark room.

Photograph 4.1: Unsafe X-Ray room design in DH Thoubal (Dark Room)

Wooden door separated the x-ray from the dark room (February 2020)

Technicians fixed personal radiation protection kit on wooden door (blue colour kit left) for protection while working in dark room. (February 2020)

- **DH Bishnupur**: As evident from the photographs below, the X-Ray services were provided in a room, which had a glass window and wooden door. Also, the glass window was adjacent to the parking area. Hence, harmful radiation penetrating outside the window could not be ruled out.

Photograph 4.2: Unsafe X-Ray room design in DH Bishnupur

X-Ray room had a glass window which was adjacent to the parking area (February 2020)

X-Ray services were provided in a room having a wooden door. (February 2020)

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that the matter will be looked into. Action taken up in this regard has not been intimated to Audit till date (July 2020).

4.6.2 Laboratory Services at test-checked DHs

The District Hospital Laboratory is expected to serve the purpose of public health laboratory and should be able to perform all tests required to diagnose epidemics or important diseases from public health point of view. IPHS envisages that the district hospitals having a capacity of 100 to 500 beds should ensure availability of 97 laboratory test services.

4.6.2.1 Availability of essential Diagnostic Services and Tests

As per IPHS Guidelines, 2012, the District Hospital Laboratory shall also serve purpose of the public health laboratory and should be able to perform 97 Diagnostic Services/Tests required to diagnose epidemics or important diseases from public health point of view. Status of the availability of these 97tests in the sample DHs is tabulated below.

Table 4.9: Availability of essential Diagnostic Services and Tests

Speciality	Total Diagnostic Services/ Tests to be ensured	Total Diagnostic Services/ Tests available at sampled DHs[7]				
		Bishnupur	Chandel	Cc'pur	Thoubal	JNIMS
Clinical Pathology	29	16	24	22	17	22
Pathology	8	0	2	3	1	8
Microbiology	8	1	2	2	0	5
Serology	7	4	5	5	4	4
Biochemistry	21	8	10	11	9	18
Cardiac Investigations	3	0	1	1	0	1
Ophthalmology	3	3	1	1	3	3
ENT	2	1	0	1	1	1
Radiology	7	2	2	4	2	7
Endoscopy	8	0	0	0	0	7
Respiratory	1	0	0	0	0	0
Total	**97**	**35**	**47**	**50**	**37**	**76**

Source: Records of Hospitals.

It is evident from the table above that JNIMS was better placed among the sampled Hospitals with 76 out of 97 Diagnostic Services/ tests being available. Out of the remaining 21 Diagnostic Services/ tests, one test was unavailable due to lack of reagents while equipment for conducting seven other tests were not available.

In the remaining for sampled DHS, the State Government had contracted Krsnaa Diagnostics to provide 53 identified tests (mainly pertaining to Pathological, microbiological, serology, bio-chemistry and cardiac related investigations) in the DHs. Further, test related to Respiratory ailments was not available in any of the sampled hospitals while endoscopy services were available only in JNIMS. Thus, despite engaging private service provider, no effort was made to cover all the 97 tests prescribed under IPHS.

During Exit Conference (July 2020), the Department stated that the 53 identified diagnostic services and tests has been made available through Public Private Partnership (PPP) mode funding under NHM.

However, the fact remains that the DHs could not provide all the 97 tests prescribed under IPHs despite engaging private service provider.

4.7 Patient safety, rights and grievance redressal

IPHS prescribes the requirement to display the Citizen's Charter at OPD and Entrance in local language including patient rights and responsibilities. Further, for effective redressal of grievances of patients, NHM Assessor's Guidebook envisaged a mechanism for receipt of complaints, registration of complaints and disposal of complaints on a first-come-first-serve basis, noting of action taken in respect of complaints in a register, periodic monitoring of system of disposals and follow-up by superior authorities as necessary.

[7] Including tests provided by Krsnaa in the DHs.

Audit observed that Citizens Charter was displayed in all the selected DHs. All the test checked DHs have stated to have set up a complaint redressal cell and also conducted patient satisfaction survey.

National Building Code of India 2016, Part 4, Fire and Life Safety requires that fire extinguishers be installed in every hospital, so that the safety of the patients/ attendants/ visitors and the hospital staff is ensured in case of any fire in the hospital premises.

Audit observed that all the selected DHs had installed fire extinguishers in the hospitals. However, none of the selected DHs had florescent fire exit plan displayed at each floor.

Conclusion

Out of the eight emergency room services in DHs, DHs at Bishnupur had only three services available (37.5 *per cent*), Chandel had four (50 *per cent*), Churachandpur had five (62.5 *per cent*) and Thoubal was doing best with six services (75.00 *per cent*) available. Out of 97 Diagnostic Services/ Tests to be ensured at DHs, the no. of available Diagnostic Services/ Tests at the sampled DHs ranged from 35 to 76 despite the services being provided by a private service provider. Tests for Respiratory ailments were not available in the sample hospitals while endoscopy services were available only in JNIMS depriving the public of these services in the DHs.

Recommendations

i. *OT services be made available in all the DHs with required manpower, equipment and drugs.*

ii. *The availability of round the clock accident and trauma services needs to be ensured as per the norms for DHs.*

iii. *The State Government may ensure availability of all the 97 tests prescribed under IPHS.*

Chapter V
Support Services

Chapter-V Support Services

Whether support services like drug storage, sterilisation, hygiene, waste management, infection control, ambulance, power back-up/UPS, *etc.* had aided the line departments in providing a safe and sterile environment.

5.1 Storage of Drugs

Drugs and Cosmetic Rules, 1945 stipulate drug storage parameters to maintain efficacy of the drugs before they are issued to patients.

Audit found that the norms and parameters prescribed in the said Rules were, however, not adhered to in the test-checked DHs. It was observed that there was no system for maintaining and recording the pharmacy temperature below 30 degree centigrade in all sampled DHs. No designated area was found earmarked for the controlled, dangerous and restricted medicines. Drugs were found kept on the floor in DH Chandel and DH Bishnupur. Improper storage of medicines and drugs would have an adverse effect on their efficacy.

5.2 Infection control

5.2.1 Sterilisation

As per Hospital Infection Control Guidelines of the ICMR 113, disinfection and sterilisation help prevent growth of bacteria/viruses, *etc*. on the medical tools, linen and consumables in addition to reducing the chances of spread of infection to patients and staff of hospitals. NHM Assessor's Guidebook recommends boiling, autoclaving, high level disinfection (HLD) and chemical sterilisation process for disinfection/sterilisation in the DHs. As per Hospital Infection Control Guidelines of ICMR, HLD is the process of complete elimination of all micro-organisms in or on a device, with the exception of small numbers of bacterial spores.

Audit found that sterilisation facility using boiling, autoclaving and chemical sterilisation was available in all test checked DHs. However, none of them undertook HLD process.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that the matter will be looked into.

5.2.2 Hygiene

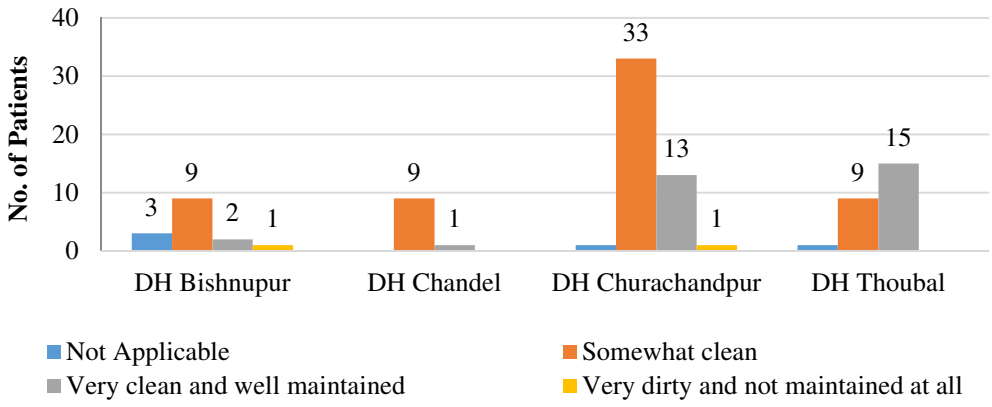
NHM Assessor's Guidebook prescribes that the hospital must have a system to take air and surface samples for microbiological survey for checking infections.

Audit observed that all the selected DHs had taken air and surface samples for checking microbial contamination in the OT.

In the patient survey, 91 (92.9 *per cent*) out of 98 respondents stated that the ward or rooms that they were admitted to were either somewhat clean or very

clean and well maintained. Only two respondents stated that the room was dirty and not well maintained. The survey details are shown in the following chart.

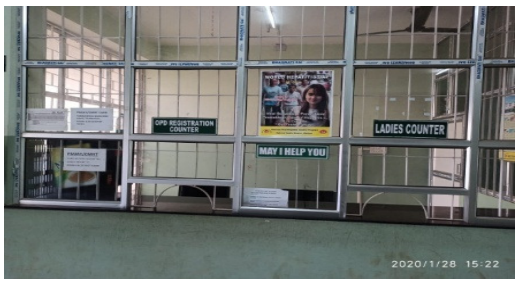
Chart 5.1: Cleanliness of ward or room admitted to



As can also be seen in the following photographs, the premises of the DHs OPD counters, seating area in OPD, *etc.* are clean, hygienic and well maintained.

Photograph 5.1: OPD Counters at the Sample DHs

DH Bishnupur

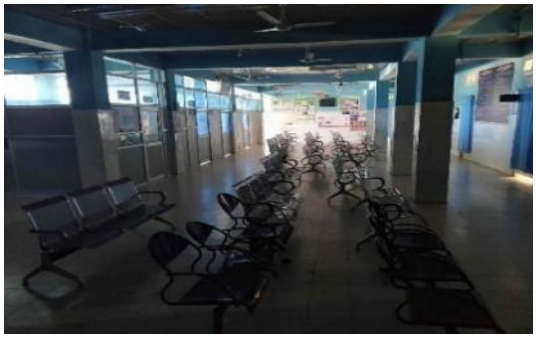


DH Chandel

DH Churachandpur

DH Thoubal

Photograph 5.2: Seating Arrangements in OPD area



DH Churachandpur

DH Thoubal

The Department apprised (September 2020) that all District Hospitals will now participate in Kayakalp Scheme of the Ministry of Health and Family Welfare, GoI which incentivises and recognises cleanliness in the hospitals.

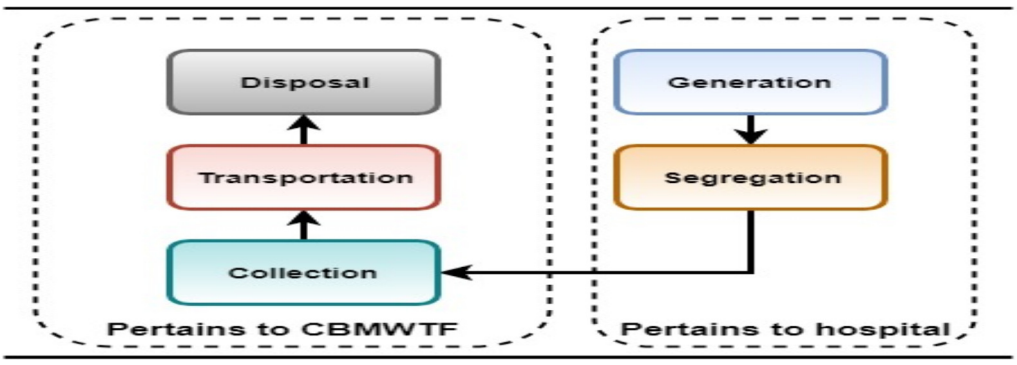
5.3 Hospital Waste management

Hospital waste management, also known as Bio-medical waste management, is a system that handles hospital-generated waste, including infectious, chemical, expired pharmaceutical and radioactive items, and sharps.

5.3.1 Bio-Medical Waste management

Bio-Medical Waste (BMW) is generated during procedures related to diagnosis, treatment and immunisation in the hospitals and its management is an integral part of infection control within the hospital premises. The GoI framed Bio-Medical Waste (Management and Handling) Rules, 1998 under Environment (Protection) Act, 1986, which were superseded by Bio-Medical Waste Management Rules, 2016. These rules stipulate the procedures for collection, handling, transportation, disposal and monitoring of the BMW with clear roles for waste generators and Common Bio-Medical Waste Treatment Facilitator (CBMWTF) as shown in chart 5.2.

Chart 5.2: Procedures for collection, handling, transportation and disposal of BMW



Biomedical /hospital waste is any kind of waste containing infectious or potentially infectious materials. It may also include medical or laboratory origin waste like unused bandages, infusion kits, *etc*. Biomedical waste management, thus, becomes an integral part of the infection controlling activities of the hospitals.

5.3.2 Segregation of Bio-Medical Waste

Bio-Medical Waste Rules, 2016 require hospitals to segregate different categories of bio-medical waste in separate coloured bins or bags at the source of generation and collected by the Common Bio-Medical Waste Treatment Facilitator (CBMWTF). The CMMWTF refers to any facility which can carry out the treatment and disposal of biomedical waste as indicated in Rule 2(g) of Bio-Medical Waste Management Rules, 2016. In Manipur, this facility is provided by Shija Hospitals, a renowned private hospital in the State.

Audit observed that the segregation of bio-medical waste was done in all the test-checked district hospitals as shown in the following photographs:

Photograph 5.3 Segregation of bio medical wastes in the selected hospitals

DH Bishnupur

DH Chandel

DH Churachandpur

DH Thoubal

5.3.3 Collection of Bio-Medical Waste

As per Rule 8(7) of the Bio-Medical Waste Management(BMW)Rules, 2016, the total time taken from the generation of untreated human anatomical waste, animal anatomical waste, soiled waste and biotechnology waste to their collection, transportation and treatment shall not exceed 48 hours.

During audit, it was noticed that bio-medical waste was collected once a week from DHs except for DH Thoubal and JNIMS, where waste were collected every alternate day and on daily basis respectively. This is in violation of Rule 8(7) of Bio-Medical Waste Management Rules. Bio-medical waste is stored before they are collected by the staff of CBWTF except in case of JNIMS, which has its own Incinerator plant with a capacity of 100 kg./ hour as shown in the photograph placed alongside.

Photograph 5.4: Incinerator plant at JNIMS

5.3.4 Effluent Treatment Plant (ETP)

Hospitals consume large volume of water per day for different purposes and also generate large volumes of wastewater that needs to be treated. Further, in respect of liquid chemical waste generated in health care facilities, BMW Management Rules mandate segregation of the waste at source and its pre-treatment or neutralisation prior to mixing with other effluent generated from health care facilities. Proper treatment of hospital wastewater is very essential because improper treatment of effluent from hospitals will lead to environment and human health issues. Hence, the selection of suitable treatment technology called Effluent Treatment Plant (ETP) for hospitals is required.

Audit noticed that the DHs had not established ETPs in any of the test-checked hospitals for pre-treatment of the liquid biomedical waste, resulting in drainage of the waste directly into the sewerage system. This was not only a violation of the Bio-Medical Waste Management Rules but also hazardous to the public health at large. In case of JNIMS, construction of ETP is 90 *per cent* complete.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that bio-medical waste are safely collected and stored and collection by CBWTF is made according to the amount collected. With respect to ETPs, although chlorination of waste is being done in the Hospitals, measures are being currently undertaken by the Department to have ETPs in the Hospitals.

5.4 Laundry services

As per DH guidelines, hospital laundry should be provided with necessary facilities for drying, pressing and storage of soiled and cleaned linens. It was observed that all these facilities were available in all the sample DHs.

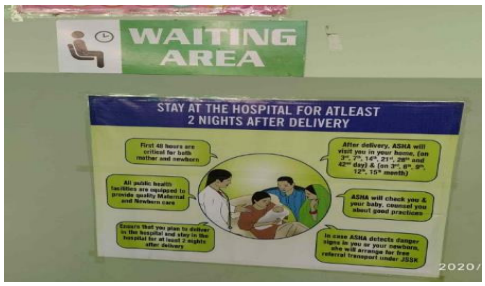
5.5 IEC Activities

Information, Education and Communication (IEC) is a public health system approach aiming at changing or reinforcing health-related behaviour in a target audience, concerning a specific problem and within a pre-defined period of time, through communication methods and principles. Under IEC, posters, flyers, leaflets, brochures, booklets, messages for health education sessions, radio broadcast or TV spots, *etc.* are printed, produced and circulated or broadcasted as a means of promoting desired & positive behaviours in the community.

IEC material were prominently visible in all the DHs. A few are shown in the following photographs.

Photograph 5.5: IEC activities visible in the DHs

DH Bishnupur



DH Chandel

DH Churachandpur

DH Thoubal

5.6 Ambulance services

As per guidelines, ambulance services are essential services. It was observed that ambulances were available in all the sampled hospitals. Free ambulance services for Pregnant Women and sick infants by calling 102 was available in all sampled Hospitals except DH Thoubal.

5.7 Power backup/UPS

It was observed that arrangements for power backup/ UPS were available in all the sampled hospitals.

Conclusion

The prevailing system of storage of drugs in the test-checked hospitals was not conducive for orderly storage and norms/parameters prescribed in the said Rules were not adhered to. No designated area was found earmarked for the controlled, dangerous and restricted medicines. Sterilisation facility for hospital equipment was available in all selected DHs.

Bio-medical wastes duly segregated were collected once a week from DHs except for DH Thoubal and JNIMS, where waste were collected every alternate day and on daily basis respectively. No ETPs had been established in any of the test-checked hospitals for pre-treatment of the liquid chemical waste, resulting in drainage of the waste directly into the sewerage system. Laundry services, IEC activities, ambulances and power backup/UPS were observed to be available at the sample district hospitals.

Recommendations

i. *Review of storage of drugs at DHs as per norms for proper storage and retrieval of drugs.*

ii. *Effluent Treatment Plants may be constructed in all the hospitals on priority. The incomplete ETP at JNIMS may be got completed urgently.*

Chapter VI

Maternal & Child Care, Cancer and HIV/AIDS Care

Chapter - VI Maternal &Child Care, Cancer and HIV/AIDS Care

Adequacy of healthcare services relating to maternal & infant care, Cancer and HIV/AIDS Care

6.1 Maternal and Child Health

Maternal health refers to the health of women during pregnancy, childbirth and the postpartum period, whereas prenatal health refers to health from 22 completed weeks of gestation until seven completed days after birth. New born health is the babies' first month of life. A healthy start during the prenatal period influences infancy, childhood and adulthood[8].

6.1.1 MMR and IMR (State level)

Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR)[9] are important indicators of the quality of maternal and child care services available and form part of the most sensitive index of quality of maternal and new born care. The All India MMR during 2011-13 stood at 167 per 100,000 which declined to130 in 2014-16 and was 113 in 2016-18. The All India IMR which stood at 40/1000 Live Births in 2013 fell to 33/1000 Live Births by 2017.

Trend of MMR and IMR in Manipur during 2014-19 was as follows:

Table 6.1: Trend of MMR and IMR of Manipur during 2014-19

Year	Number of reported			MMR (of one lakh live births)	IMR (of 1000 live births)
	Livebirths	Maternal deaths	Infant deaths		
2014-15	40,749	13	70	-	11
2015-16	39,640	6	93	-	09
2016-17	40,426	12	80	-	11
2017-18	38,577	23	141	-	12
2018-19	37,991	12	82	-	11
Total	**1,97,383**	**66**	**466**	-	-

Source: Sample Registration Survey (SRS), GoI.

It was observed that the IMR for the State of Manipur as calculated by the Sample Registration Survey (SRS) ranged between 9 to 12 during 2012-14 and 2016-18.The SRS, which is responsible for calculating IMR and MMR in India, has not calculated MMR separately for the State of Manipur as it requires prohibitively large sample size to provide robust estimates.

The Department stated (September 2020) that since the reported delivery per year of Manipur is less than one lakh, SRS does not cover the Maternal Mortality Rate (MMR) of the State. So the State does not have an MMR till date (September 2020).

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8 According to World Health Organization (WHO).

9 Maternal Mortality Rate (MMR) is the number of deaths per 100,000 live births due to maternal causes. Infant Mortality Rate (IMR) is the number of deaths of infants (under one year) per 1,000 live births.

6.1.2 Infant deaths and maternal deaths in the test-checked DHs

The trend of infant deaths and maternal deaths of the test-checked DHs during 2014-19 was as given in table 6.2:

Table 6.2: Trend of infant deaths and maternal deaths in the test-checked DHs

Year	DH Bishnupur			DH Chandel			DH Churachandpur			DH Thoubal		
	Live births	Infant deaths	M/ deaths	Live birth	Infant death	M/ death	Live birth	Infant death	M/ death	Live birth	Infant death	M/ death
2014-15	833	-	-	153	-	-	2,756	6	2	1,216	-	-
2015-16	947	-	-	132	-	-	2,968	45	3	1,648	-	-
2016-17	792	-	-	119	-	-	2,831	31	1	2,424	-	-
2017-18	730	-	-	65	-	-	3,011	29	2	1,594	-	-
2018-19	648	-	-	184	-	-	2,580	19	0	1,573	-	-
Total	**3,950**	**-**	**-**	**653**	**-**	**-**	**14,146**	**130**	**8**	**8,455**	**-**	**-**

Source: HMIS.

M/death=Maternal death

From the Table above, it can be seen that only DH Churachandpur had maintained the records of infant and maternal deaths whereas, the other three DHs have not maintained such records.

6.1.3 Antenatal care

Ante-Natal Care (ANC) is the systemic supervision of women during pregnancy to monitor the progress of foetal growth and to ascertain the well-being of the mother and the foetus. ANC involves general and abdominal examination[10] and laboratory investigations to monitor pregnancies, management of complications, such as Reproductive Tract Infection (RTI)/ Sexually Transmitted Infection (STI) and comprehensive abortion care. Early detection of complications during pregnancy through ANC check-up is important for preventing maternal mortality and morbidity. Quality ANC includes minimum of at least four ANCs including early registration, first ANC in first trimester along with physical and abdominal examinations, two doses of tetanus toxoid (TT) immunisation, *etc.*

Various guidelines for expectant mothers as published under the Ministry of Health and Family Welfare such as "Journeys of the First 1000 days of a Child", "My safe Motherhood" have reiterated the importance of TT1 injection or 100 IFA tablets not only for the safety of the mother but for the physical and mental development of the child. TT1 injections are meant for the protection of expectant mothers and their babies from tetanus while IFA tablets are meant for protecting them against iron deficiency anaemia.

The total number of pregnant women (PW) in the State registered for ANC, number of PW who received at least three ANC check-ups, number of PW given TT1/Booster, *etc.* during 2014-19 was as follows:

[10] Weight measure, blood pressure, respiratory rate, check for pallor and oedema, abdominal palpation for foetal growth, foetal lie and auscultation of Foetal Heart Sound (FHS) *etc*.

Table 6.3: Pregnant women registered and received ANC services

Year	Number of PW registered for ANC	No. of PWregistered in the first trimester	No. of PWs received at least 3 ANC check-ups (*per cent*)	TT1 or Booster given to PWs (*per cent*)	100 IFA Tablets given to PWs
2014-15	79,090	46,742(59.1)	42,076 (53.2)	39,941 (50.5)	21,592 (27.3)
2015-16	70,899	44,808 (63.2)	42,540 (60.0)	37,790 (53.3)	25,524 (36.0)
2016-17	60,132	36,500 (60.7)	39,327 (65.4)	32,832 (54.6)	37,763 (62.8)
2017-18	55,807	34,098 (61.1)	26,453 (47.4)	37,056 (66.4)	25,616 (45.9)
2018-19	57,301	34,381 (60.0)	29,052 (50.7)	35,746 (62.4)	22,233 (38.8)
Total	**3,23,229**	**196529 (60.8)**	**1,79,448 (55.5)**	**1,82,865 (56.6)**	**1,32,728 (41.0)**

Source: HMIS.

- The total number of PW with at least three ANC check–ups declined from 53.2 *per cent* in 2014-15 to 50.07 *per cent* in 2018-19;
- The percentage of mothers registered in the first trimester hovered around 60 *per cent* during 2014-19;
- The number of TT1 or Booster dosages administered to pregnant women had increased from 50.5 *per cent* in 2014-15 to 66.4 *per cent* in 2017-18 but declined to 62.4 *per cent* in 2018-19.
- The number of PW given with IFA 100/180 Tablets showed a fluctuating trend, it improved from 27.3 *per cent* in 2014-15 to 62.8 *per cent* in 2016-17 but declined to 38.8 *per cent* in 2018-19.

It is thus imperative that the District Hospitals ensure that they are able to reach out to more expectant mothers through IEC activities or ANMs.

6.1.4 Institutional deliveries

During 2014-19, a total of 1.97 lakh deliveries were reported, of which, 1.60 lakh (81.2 *per cent*) were institutional deliveries (Public and Private), while 0.37 lakh (18.8 *per cent*) were home deliveries. Year-wise figures of institutional deliveries (ID) and home deliveries in the State are given in the table below:

Table 6.4: Institutional deliveries and delivery at home during 2014-19

Year	Details of Institutional deliveries (*per cent*)			Home deliveries (*per cent*)	Total reported deliveries
	Public Institutions	Private Institutions	Total		
2014-15	26,407(81.2)	6,114(18.8)	32,521(80.0)	8,175(20.0)	**40,696**
2015-16	26,120(82.1)	5,694(17.9)	31,814 (80.3)	7,798 (19.7)	**39,612**
2016-17	-*	-	33,184(81.8)	7,350(18.2)	**40,534**
2017-18	25,858(81.9)	5,715(18.1)	31,573 (81.9)	6,980 (18.1)	**38,553**
2018-19	25,347(81.0)	5,946(19.0)	31,293 (82.3)	6,735 (17.7)	**38,028**
Total	**1,03,732**	**23,469**	**1,60,385(81.2)**	**37,038(18.8)**	**1,97,423**

Source: HMIS.

**Data not available*

- The percentage no. of deliveries at public facilities to total reported institutional deliveries[11] ranges from 81.2 *per cent* in 2014-15 to 81.0 *per cent* in 2018-19. This shows that around 20 *per cent* of expectant mothers have a preference to deliver at private hospitals.

[11] Data are not available for 2016-17.

On being pointed out the difference between total number of pregnant women registered for ANC (3,22,293) and total reported deliveries (1,97,423), the Department stated (September 2020) that there is 10 *per cent* wastage in the total ANC registration duplication in registration as some pregnant women registered in PHCs are also registered again when availing services in higher facilities such as CHCs, DHs or MCs.

The reply of the Department is not convincing as the difference in the two sets of data is more than 33 *per cent* which needs to be addressed. Further, in view of the reasons for data mismatch put forward, the Department needs to improve the monitoring mechanism and ensure proper reporting.

6.1.5 C-Section deliveries

Cesarean delivery, also called C-section, is a surgery to deliver a baby whereby the baby is taken out through the mother's abdomen. Most cesarean births result in healthy babies and mothers. However, C-section being a major surgery it carries risks. Healing also takes longer than normal delivery. The number of C-Section deliveries in the sampled hospitals is as shown in the table below:

Table 6.5: C-section deliveries during 2014-19

Year	DH Bishnupur	DH Chandel	DH Churachandpur	DH Thoubal	JNIMS	Total
2014-15	48	4	257	102	2194	2605
2015-16	97	0	328	322	2605	3352
2016-17	158	5	489	848	3159	4659
2017-18	128	0	607	422	6583	7740
2018-19	147	44	377	468	6137	7173
Total	**578**	**53**	**2,058**	**2,162**	**20678**	**25,529**

It is evident that the number of C-section deliveries is on constant rise in the sampled hospitals. The number of such deliveries has increased by 4568 (175.35 *per cent*) during 2014-15 to 2018-19 with the largest increase in JNIMS. This is a cause of concern as it puts lives of women and child at risk, besides pressure on the already burdened hospital infrastructure.

6.1.6 Post-natal care

Maternal mortality is a key indicator for maternal and child health. It can result from multiple reasons, such as medical, socio-economic and health system-related factors. Ensuring 48 hours stay in hospital during childbirth is an important component for identification and management of emergencies occurring during post-natal period and reducing MMR.

Table 6.6: No. Of post-partum check-ups within 14 days of delivery

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
No. of PWs (% of total IDs)	15,166(46.7)	16,665(52.4)	16,502(49.7)	19,816(62.8)	18,340(58.6)

Source: HMIS.

It is observed from the table above that the number of post-partum check- up showed a mixed trend during 2014-19. However, there was a decline in the number of check-ups in 2018-19 as compared to 2017-18, which is a cause for

concern. The percentage of post-partum check-ups to total institutional deliveries ranged from 46.7 *per cent* to 62.8 *per cent* during the five-year period.

6.1.7 New-born care services

DHs are to provide six types of New-born care services as prescribed by MNHT guidelines which included care and follow-up of new born babies as well as immunization services. However, audit found that among these services, the follow-up of high risk new-borns was not provided in DH Bishnupur and DH Chandel adversely impacting such cases.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that the Department has been conducting six to seven months' training in JNIMS on new-born care services to address the issue. The Department also stated that follow-up of high risk new-borns in DH Bishnupur and DH Chandel are being carried out by the Accredited Social Health Activists (ASHAs) as part of the Home Based New-born Care programme under child health.

6.1.8 Immunisation of new-borns

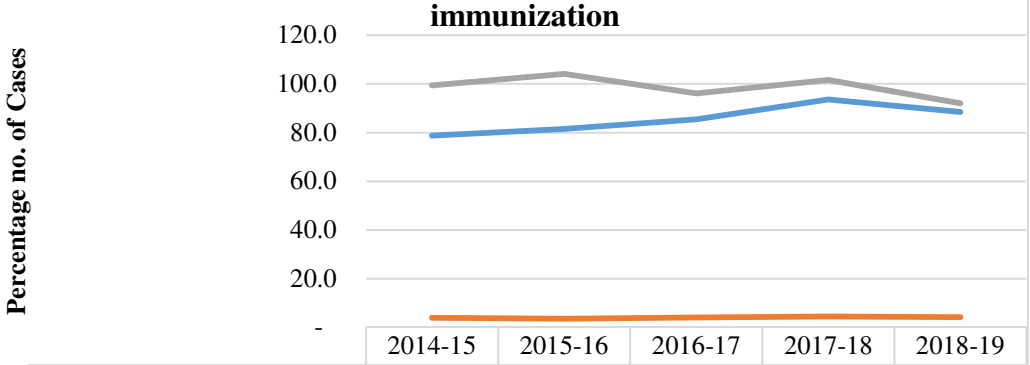
As per Maternal New-born Health Toolkits 2013, four vaccines *viz.* (i) Oral Polio Vaccine 0-OPV0, (ii) Bacille Calmette Guerin–BCG, (iii) Hepatitis-B0 and (iv) Inj. Vitamin-K are to be administered on the day of birth of the child.

It is observed from the following chart that the percentage of New-borns weighing less than 2.5 kg to total new-borns weighed at birth has seen a slight increase in the State during 2014-15 to 2018-19. As mentioned in the preceding paragraphs, the distribution of IFA tablets if given due importance in the DHs could arrest the growing number of underweight babies.

On the other hand, a positive observation is that Infants fully immunised to reported live births (BCG, three dose each of DPT and Polio and Measles) have remained around 100 *per cent*[12] in the State.

[12] As per HMIS State fact sheets, high percentage of full immunisation reported in HMIS may be due to reporting of immunisation of a beneficiary by more than one facility.

Chart 6.1: Chart regarding newborn care and immunization



	2014-15	2015-16	2016-17	2017-18	2018-19
Newborns breastfed within 1 hr of birth (to total reported live births) (in per cent)	78.8	81.5	85.4	93.6	88.5
Newborns weight less than 2.5 kg (to total newborns weighed at birth) (in per cent)	3.9	3.5	4.0	4.5	4.2
Infants fully immunized to reported live births (BCG,3 dose each of DPT and Polio and Measles) (in per cent)	99.4	104.2	96.1	101.6	92.1

6.1.9 Pregnancy outcomes

With a view to gauge the quality of maternity care provided by the hospitals, Audit test checked the pregnancy outcomes in terms of live births, still births[13] and neonatal deaths pertaining to 2014-19, as discussed in the following paragraphs:

6.1.9.1 Still births

Still birth or intrauterine foetal death is an unfavourable pregnancy outcome and is defined as complete expulsion or extraction of baby from its mother where the foetus does not breathe or show any evidence of life, such as breathing of the heart or a cry or movement of the limbs[14]. World Health Organisation (WHO) defines Still Birth for international comparison as a baby born with absolutely no signs of life at or after 28 weeks of gestation. Still birth rate is a key indicator of quality of care during pregnancy and childbirth.

Audit observed that still birth rate of four test-checked DHs and JNIMS during 2014-19 was between 0.4 and 1.7 *per cent* as given in the following table:

[13] Mismanaged ANC and delivery process convert a normal delivery into stillbirth.
[14] As per GoI Operational guidelines for establishing sentinel stillbirth surveillance system 2016.

Table 6.7: Hospital wise Stillbirths during 2014-19

Name of DH	No. of deliveries	No. of live births (%)	Still births (%)
Thoubal	8,398	8,324(99.1)	74 (0.9)
Churachandpur	14,146	13,938(98.5)	208 (1.5)
Bishnupur	3,970	3,954(99.5)	16 (0.5)
Chandel	653	642(98.3)	11(1.7)
JNIMS	28,521	28,126 (98.6)	395(1.4)
Average per cent			**1.2**

Source: Records of District Hospitals.

The still birth rate of Churachandpur, Chandel and JNIMS with 1.5, 1.7 and 1.4 *per cent* were higher than the average of the five test-checked Hospitals (1.2 *per cent*) and thus required to be addressed by the DH administration.

6.1.10 Veracity of HMIS Data

NHM interventions have increased the demand for disaggregated data on population and health for use in both micro-level planning and program implementation. At the same time, understanding the synergy between availability of services, cost involved in provision of public health care services, expenditure and pattern of utilisation among various sections of population, including vulnerable sections of the society, are important aspects that influence decision making. A continuous flow of good quality information on inputs, outputs and outcome indicators facilitates monitoring of the objectives of NRHM.

A dedicated Health Management Information System (HMIS) web-portal has been established at the URL (*http://www.nrhm-hmis.nic.in*), where the users at the facility level can log on and enter the physical and financial performance data directly onto the portal. The HMIS portal facilitates data to be entered also.

Audit cross-checked three out of 355 parameters available at HMIS with those in the DH records for 2014-15 to 2018-19. The data comparison is shown in Table 6.8:

Table 6.8: HMIS Vs DH Records

Month/ Year	Total No. of births		Total No. of C-section deliveries		Total No. of still births/deaths	
	HMIS data	DH records	HMIS data	DH records	HMIS data	DH records
2014-15	9,204	9,913	2,003	2,605	25	101
2015-16	8,239	10,874	1,785	3,352	18	113
2016-17	10,873	11,833	2,346	4,659	24	147
2017-18	11,013	12,003	1,280	7,740	27	162
2018-19	10,590	11,065	1,160	7,173	42	181
Total	**49,919**	**55,688**	**8,574**	**25,529**	**136**	**704**
Difference	**5,769**		**16,955**		**568**	
Per cent	***11.56***		***197.74***		***417.64***	

Source: Records of Hospitals and HMIS.

The above table shows that there is a huge mismatch in the data entered into the HMIS with that of the records maintained by the DHs. Incorrect uploading of numbers in HMIS defeats the very purpose of a sound data management and reporting system. All efforts must be made to rectify the lapses so that HMIS can provide correct data to all stakeholders involved.

The Department stated (September 2020) that HMIS is a new concept and its use among DHs' staff under DHS is limited. The Department also stated that they will need to be oriented and will take some more time. However, action taken in this regard has not been intimated to audit.

6.1.11 Maternal and infant care

As per Maternal and Newborn Health Toolkit (MNHT) guidelines (January 2013), various aspects of the Maternity and Child Care services to be provided by DHs are discussed below.

6.1.11.1 Maternal health services

Under MNHT guidelines, DHs are expected to provide 26 different maternal health services (as shown in ***Appendix I***).

Audit found that all the 26 required maternal healthcare services were being provided in all sample DHs. The only exception noticed in audit was that Blood bank/storage centre was not available in DH Chandel. As such, cold storage equipment was being utilised as temporary blood storage equipment.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that the matter will be looked into.

6.1.11.2 Maternity Laboratory investigations

Under MNHT guidelines, DHs are expected to provide 10 types of Maternity Laboratory investigations such as blood tests, VSG, pap smear tests *etc.* However, audit found that among these tests, the Pap smear test was not available in DH Chandel and DH Bishnupur while Gram staining test was not available in DH Bishnupur and DH Thoubal. Lack of Pap smear test may hamper cervical cancer detection while lack of Gram staining test may hamper detection of bacteria.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that the matter will be looked into.

6.1.11.3 Human resources required for maternal care

MNHT guidelines prescribe four types of Human resource *viz.* (i) Specialists including gynaecologist/ EmOC, anaesthetist/LSAS, paediatrician, (ii) Medical Officers, (iii) Staff nurse, cleaning staff, counsellor, lab technician, and (iv) certified Sonologist (on call after routine hours) for providing quality maternal care by DHs *etc.*

It was seen that DH Bishnupur, DH Chandel and DH Thoubal did not provide for services of a certified Sonologiston call after routine hours thereby maternal care using ultrasonography was adversely impacted.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that action has already been taken up under LAQSHYA programme of the Ministry of Health & Family Welfare, GoI and these deficiencies would be taken care of very soon.

Despite action taken by the Department, human resource deficiencies in DHs continued.

6.1.11.4 Eclampsia Room equipment

Eclampsia during pregnancy is a life-threatening medical emergency Pre-eclampsia is a condition that can develop during pregnancy characterised by high blood pressure (hypertension) and protein in the urine. If not properly recognised and managed, pre-eclampsia can progress to eclampsia, which is defined as the development of seizures in a woman with pre-eclampsia. Eclampsia is serious for both mother and baby and can even be fatal.

Under MNHT guidelines, DHs are expected to have 25 types of Eclampsia Room equipment such as labour costs, ACs, oxygen cylinders and standard medical equipment for deliveries. DHs were not fully equipped as shown below:

Table 6.9: Availability of Eclampsia Room equipment

Hospitals	Availability of Eclampsia Room equipment
DH Bishnupur	Air conditioners, Pulse oxymeter, Kelly's Pad, Nebuliser are not available in the Eclampsia room.
DH Chandel	Most of the equipment were not available (24)
DH Churachandpur	Two Kelly's Pad not available.
DH Thoubal	Foot Operated Suction Machine, Pulse oxymeter – with two adult probes and one neonatal probe were not available.

Source: Records of District Hospitals.

From the above table, it is observed that Eclampsia Room equipment was almost non-existent in DH Chandel, adversely affecting emergency treatment which can jeopardise both mother and child's life.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that under LAQSHYA program of the Ministry of Health & Family Welfare, GoI about provision for 60 *per cent* of the required equipment pertaining to Maternal Health has already been approved.

6.1.12 Implementation of Janani Shishu Suraksha Karyakaram (JSSK) in DHs

Janani Shishu Suraksha Karyakaram (JSSK) was launched in June 2011 to eliminate out-of-pocket expenses for institutional delivery of pregnant women and treatment of sick new-born till 30 days after birth. The entitlements for pregnant women and sick new-born are:

a) Free Transport from Home to Health Institutions and referrals

b) Exemption from all kinds of User Charges

c) Free drugs and consumables

d) Free Essential Diagnostics (Blood, Urine tests and Ultra-sonography, *etc.*)

e) Free and zero expense Delivery and Caesarean Section

f) Free provision of Blood

g) Free Diet during stay in the health institutions (up to three days for normal delivery & seven days for caesarean section)

h) Drop Back from Institutions to home after 48 hours stay

Norms for provisioning of various maternal health services and resources, *viz*., human resources, drugs, consumables and equipment for different levels of hospitals have been specified in the Guidelines of Janani Shishu Suraksha Karyakram (JSSK), issued by the GoI for delivery of quality maternal health services. As per the Guidelines for JSSK, availability of drugs and consumables is to be ensured at the public health institutions (DHs). Also, blood banks are to be established and operationalised at district level.

6.1.12.1 Availability of Essential drugs and consumables under JSSK

With regard to availability of essential drugs and essential consumables, Audit found that many essential drugs and consumables, which should be available as per JSSK norms were not available in the District Hospitals at the time of audit (December 2019 to March 2020). Further, there were many instances of stock out of required drugs. Details are given in ***Appendix II(A) to II(E)***. Summary of the status of non-availability of essential drugs and essential consumables are given below:

Table 6.10: Essential drugs and consumables for Intra-Partum Normal Delivery (during December 2019 to March 2020)

Name of District Hospital	Total no. of essential drugs	No. of available essential drugs	Total no. of essential consumables	No. of available essential consumables
Bishnupur	24	18	18	17
Chandel		10		13
Churachandpur		11		11
Thoubal		0		0

Source: Records of District Hospitals.

Out of a total of 24 essential drugs and 18 essential consumables for Intra-Partum Normal Delivery, the essential drug availability ranged from NIL to 18 while the essential consumables ranged from NIL to 17 in the sample DHs. There were no essential drugs and consumables available at DH Thoubal.

Table 6.11: Essential drugs and consumables for Intra-Partum C- Section Delivery (during December 2019 to March 2020)

Name of District Hospital	Total no. of essential drugs	No. of available essential drugs	Total no. of essential consumables	No. of available essential consumables
Bishnupur	16	11	22	19
Chandel		5		18
Churachandpur		13		0
Thoubal		0		0

Source: Records of District Hospitals.

Out of a total of 16 essential drugs and 22 essential consumables for Intra-Partum C- Section Delivery, the essential drug availability ranged from NIL to 13 while the essential consumables ranged from NIL to 19 in the DHs.

During Exit Conference (July 2020), the Department stated that a committee was formed wherein it was decided to provide kits for each type of delivery and this has been in implementation since 2017-18. Further, the NIL report in the case of Thoubal DH could be because of the non-availability only at the time of audit.

On comparing the above table with **Table 6.5** relating to C-Section deliveries, it is observed despite shortage of these essential C-section delivery drugs in all DHs, especially DH Thoubal, such deliveries were performed at the DHs. It is not known how DH Thoubal were asked to perform these surgeries in absence of required drugs and whether patients were asked to purchase these drugs.

Table 6.12: Essential drugs for New-born (during December 2019 to March 2020)

Name of District Hospital	Total no. of essential drugs	No. of available essential drugs
Bishnupur	14	9
Chandel		4
Churachandpur		6
Thoubal		0

Source: Records of District Hospitals.

Out of a total of 14 essential drugs for new-borns, the essential drug availability ranged from NIL to nine in the sample DHs.

As such, norms for providing drugs and consumables to women during delivery and to new-born as specified in the JSSK guidelines were not fully complied with in the sample DHs. It is also observed that all DHs especially DH Thoubal are unprepared in terms of availability of drugs and consumables to handle such deliveries. This had resulted in out of pocket expenses on the part of patient parties to the extent of such unavailable drugs and consumables. As such, this had adverse impact on the delivery of quality maternal health services in all the DHs.

During Exit Conference, the Department stated that 10 out of 14 essential drugs for new-borns are available (July 2020). The reply is not tenable as the records of the DHs showed that their availability ranged from NIL to nine in the sampled DHs.

Conclusion

IMR for the State of Manipur ranged between 9 to 12 during 2012-14 and 2016-18. Although the number of PWs registered in 2014-15 declined from 79,090 to 57,301 in 2018-19, there is an increase in the percentage of PW registered in the first trimester, PW getting TT1 or Booster dosages and IFA 100/180 tablets during this period. The percentage of PW opting for home deliveries declined from 20.0 *per cent* in 2014-15 *to* 17.7 *per cent* in 2018-19. The number of post-partum check-ups showed an increasing trend in the State during the period. Follow-up of high risk new-borns is not provided in DH

Bishnupur and DH Chandel. Still birth rate of four test-checked DHs and JNIMS during 2014-19 was between 0.4 and 1.7 *per cent*.

Huge mismatches were noticed in the figures uploaded in the HMIS with that of the actual records. None of the hospitals kept records of data being collected before uploading to HMIS. Eclampsia Room equipment is almost non-existent in DH Chandel.

Under JSSK, we noticed shortage of essential drugs and consumables for Intra-partum under Normal and C-section deliveries and for new-borns in all the sampled DHs while there was complete absence of drugs and consumables at DH Thoubal.

Recommendations

i. *The State Government may take steps to further improve the facilities available for safe deliveries of babies at the DHs in line with the MNHT guidelines*

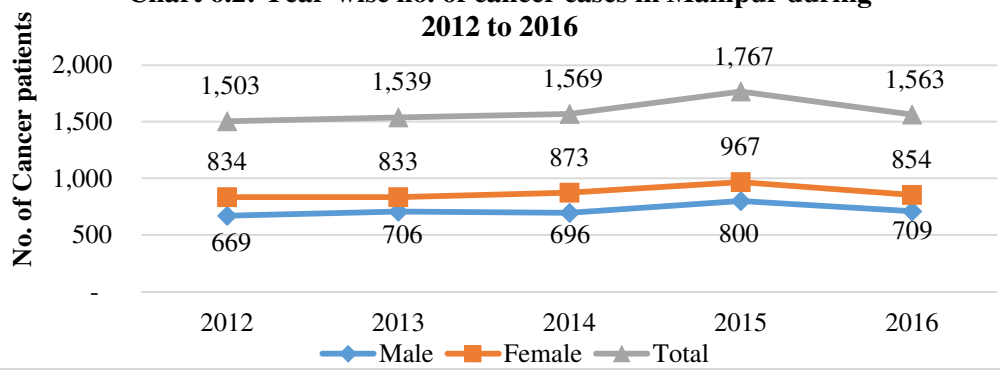
ii. *The State Government may take up steps to provide actual figures in the HMIS and ensure that DH administration verifies the data before it is uploaded on HMIS.*

6.2 Cancer

6.2.1 Cancer indicators

The following charts depict the status of cases involving cancer in the State during 2012-16.

Chart 6.2: Year-wise no. of cancer cases in Manipur during 2012 to 2016

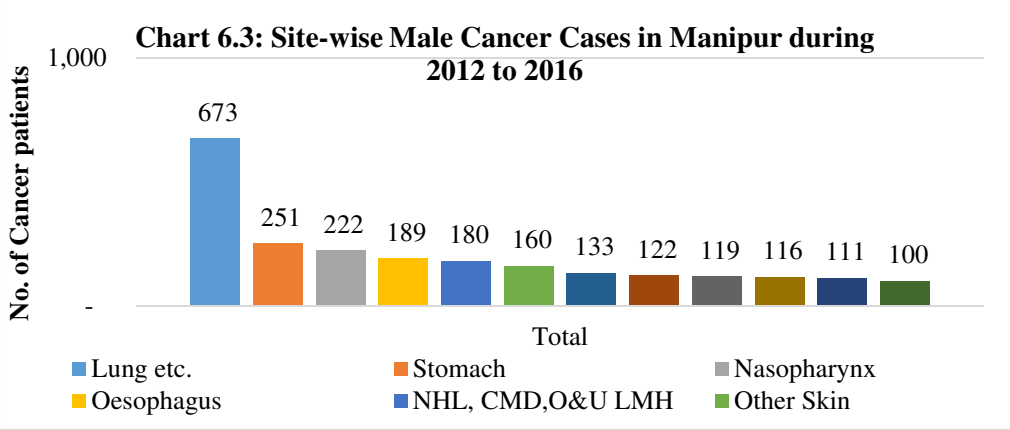


From the above chart, it is observed that the number of cancer cases detected every year in the State is approximately around 1,500 during the five-year period. It is also observed that there are more number of female cases than male cases every year.

Table 6.13: Incidence of common types of cancer in Manipur during 2012-16

Year	Lung	Stomach	Nasopharynx	Oesophagus	Breast	Cervical	Liver	Thyroid	Other	Total
2012-16	1295	405	343	189	682	417	133	341	1896	**5701**
In per cent	*22.32*	*6.98*	*5.91*	*3.25*	*11.75*	*7.18*	*2.29*	*5.87*	*34.40*	

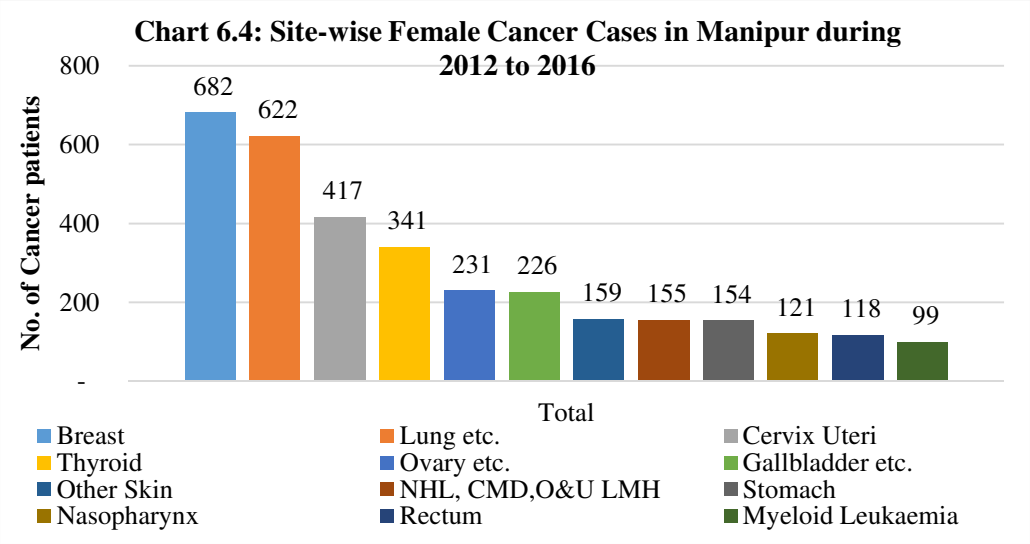
Source: Records of Population Based Cancer Registry, Imphal.



Source: Records of Population Based Cancer Registry, Imphal.

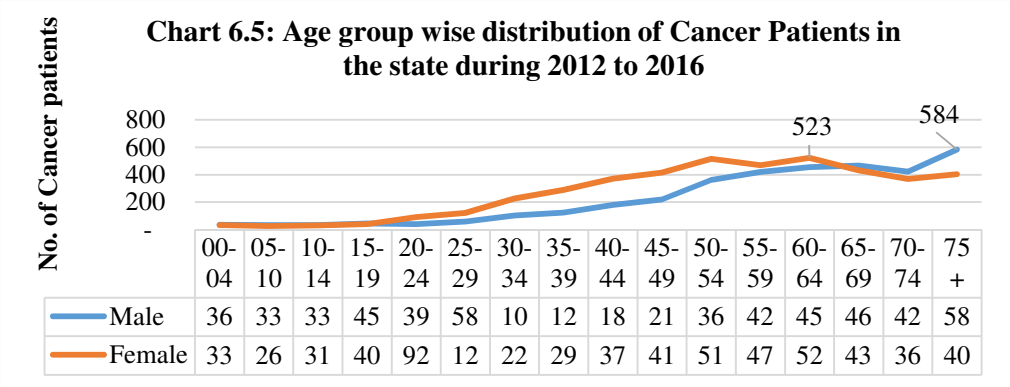
a) NHL means Non-Hodgkin lymphoma, b) CMD means Chronic myeloid leukemia, c) O&U means ill-defined sites in Digestive Organs, Respiratory System and Intrathoracic Organs, Retro peritoneum and Peritoneum, Endocrine Glands and Related Structures, Lymph Nodes, Unknown Primary Site; and d) LMH means Malignant neoplasm of lymphoid, hematopoietic and related tissue.

From the above chart, it is observed that the highest incidents of cancer in males is Lungs cancer followed by Stomach, Nasopharynx and Oesophagus and NHL, CMD, O&U LMH cancer.



Source: Records of Population Based Cancer Registry, Imphal.

In case of females, it is observed that the highest incidents of cancer are Breast cancer followed by Lungs, Cervix Uteri and Thyroid cancer.



	00-04	05-10	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+
Male	36	33	33	45	39	58	10	12	18	21	36	42	45	46	42	58
Female	33	26	31	40	92	12	22	29	37	41	51	47	52	43	36	40

Source: Records of Population Based Cancer Registry, Imphal.

From the above chart, it is observed that the highest incidents of cancer in males occur in the age group of 75+.years while in case of females, the highest incidents of cancer occur in the age group of 60-64 years.

6.2.2 Cancer Services

As per Operational Framework: Screening and Management of Common Cancers (August 2016), cancer screening services are to be provided in DHs. Here, three types of screenings are to be performed *viz.* mouth, breast and cervical cancer.

Audit found that three of the four sampled DHs had diagnosed cancer cases during 2014-15 to 2018-19 and details are given below. No Oncologist has been posted in DH Bishnupur and hence the DH did not diagnose any case during 2014-15 to 2018-19 while DH Churachandpur diagnosed 412 (95.81 *per cent*) of total 430 cases diagnosed in the sampled DHs.

Table 6.14: No. of cancer cases diagnosed during 2014-15 to 2018-19

Types of cancer	DH Bishnupur	DH Chandel	DH Churachandpur	DH Thoubal
Oral	-	-	13	-
Cervical	-	-	21	-
Breast	-	-	12	1
Others	-	3	366	14
Total	**-**	**3**	**412**	**15**

Source: Records of District Hospitals.

Furthermore, audit found that the following services and linkages are available for cancer treatment in the sample DHs.

Table 6.15: Services and linkages available for cancer treatment

DH name	Services available in DH	Linkage to nearest tertiary centres/ medical colleges for further treatment
Bishnupur	Only FNAC facility is available	Linked to RIMS Hospital.
Chandel	Only biopsy excision is available.	Linked to RIMS/ JNIMS Hospital.
Churachandpur	Oncology and Palliative OPD, day care chemotherapy centre	
Thoubal		

Source: Records of District Hospitals.

While only Fine Needle Aspiration Cytology (FNAC) facility and biopsy excision are available in DH Bishnupur and DH Chandel, Oncology and Palliative OPD and day-care chemotherapy centre are available in DH Churachandpur and DH Thoubal. Thus, the services provided to cancer patients are not uniform in the sample DHs. Also, in case of requiring further treatment, linkage to the nearest tertiary centres/ medical colleges is provided at RIMS or JNIMS Hospital in Imphal.

Further action in this regard should be encouraged by State Government since cancer patients are largely dependent on hospitals in Imphal. It would be challenging to access these hospitals in times of emergency or prolonged ill health, when it becomes difficult for patients to travel long distances.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that the matter will be looked into. They also stated that cancer screening services had been made available in the DHs since 2018 under the Non-Communicable Disease programme.

Conclusion

The number of cancer cases detected in the State is 7,941 (Males: 3580, Females: 4361) during 2012-16. The number of female cases detected were more than male cases in all five years. The highest number of incidents is of lung, stomach and nasopharynx cancer. Three of the four sampled DHs (except Bishnupur) have been diagnosing cancer cases during 2014-15 to 2018-19 but the services provided to cancer patients are not uniform in the sample DHs and referrals to RIMS/JNIMS at Imphal was necessitated.

Recommendations

i. *The State Government may take up steps to post dedicated oncologists at each DHs.*

ii. *The State Government may take up steps to provide day-care chemotherapy centres at all DHs, so that pressures on referral hospitals for routine treatment of cancer are reduced.*

6.3 HIV/AIDS

6.3.1 Overview of HIV positive cases diagnosed in DHs during 2014-15 to 2018-19

The following is an overview of HIV positive cases diagnosed in the State and the sample DHs during 2014-15 to 2018-19.

Table 6.16: HIV positive cases diagnosed in DHs during 2014-15 to 2018-19

Incidents	State Total	Bishnu-pur	Chandel	Churac-handpur	Thou-bal
Total tested for HIV	6,45,238	21,214	11,692	30,022	29,318
Total detected with HIV	5,875	139	139	794	127
Pregnant Women tested for HIV	2,35,118	9,244	4,242	16,184	14,930
Pregnant Women detected with HIV	412	11	34	90	6
Injecting Drug Users tested for HIV	1,44,135	2,732	3613	8,937	4,063
Injecting Drug Users tested for HIV detected with HIV	177	5	12	53	17
Female Sex Workers tested for HIV	45,817	717	1,593	8,996	682
Female Sex Workers detected with HIV	47	0	3	3	1
Men having Sex with Men tested for HIV	8,749	1,658	2	342	554
Men having Sex with Men detected with HIV	8	2	0	4	0

Source: Records of Manipur State AIDS Control Society (MACS).

The State Society did well in testing for AIDS and the form test checked DHs were also found to be doing adequate testing for AIDS.

6.3.2 Non-availability of Doctors and Lab technicians and other difficulties

The Anti-Retroviral Treatment (ART) Centre, identifies the eligible persons with HIV/AIDS requiring ART through laboratory services, providing ART drugs free of cost to eligible persons, providing counselling services before and during treatment, educating persons and escorts on nutritional requirements, hygiene and measures to prevent transmission of infections.

Audit observed following regarding the non-availability of Doctors and Lab technicians and other difficulties faced by ART Centres.

Table 6.17: Non-availability of Doctors and Lab technicians at ART Centres

District Hospital	Treatments provided at ART Centres	Observation
Bishnupur	1st line treatment medicines provided.	-
Chandel		No dedicated doctor provided to ART centre. Lab technician shared between DH Chandel and DH Thoubal. Some ART Medicines issued to DH are very old and sometimes a few months away from being expired at the time of issue to DH.
Thoubal		Lab technician shared between DH Chandel and DH Thoubal
Churach-andpur	1st and 2nd line treatment medicines provided.	-

Source: Records of District Hospitals.

The State society did well in testing for AIDS and the four test checked DHs were also found to doing adequate testing for AIDS.

Absence of dedicated doctor at ART centre is a serious cause of concern as doctors are required for clinical assessment of the patients. Shortage of dedicated lab technicians also affects the testing of samples and assessment of the disease.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that that the matter will be looked into for recruitment of doctors and Lab technicians.

In their reply, MACS stated (July 2020) that due to acute shortage (173 vacant posts out of 496 sanctioned posts), one Lab technician is posted at both DH Chandel and DH Thoubal. Further, they also stated that approval has been received to fill up 86 posts. MACS stated that once these vacant posts are filled up, the issue will definitely be addressed. Action taken up in this regard has not been intimated to Audit till date (July 2020).

6.3.3 Scarcity of ART drugs

Government of India has been providing free ART since April 2004. In all DHs, 20 types of ART drugs were being supplied to the ART centres by the Manipur AIDS Control Society.

However, audit observed that the drug supply was deficient and inadequate due to which drugs could not be provided to the patients. Stock-out position of the ART drugs during 2014-15 till the date of audit (February 2020) is given in ***Appendix III***.

It was thus observed that out of 20 types of drugs, there was shortage of 12 drugs during the period from 2014-15 till the date of audit (February 2020). The ART centres, did not receive uninterrupted supply of drugs.

It was stated by the ART centres that during shortage periods, ART drugs were rationed to the patients. However, such shortages would adversely affect the quality and quantity of services provided by ART centres.

During Exit Conference (July 2020), the Department stated that during shortages medicines are procured from the market. The reply is not tenable as such procurements, if any, was insufficient to meet the demands of the ART centres as pointed out in this observation.

In their reply, MACS stated (July 2020) that all the drugs are supplied centrally from NACO. They stated that due to certain logistics and technical issues, delivery of some of these medicines is delayed from the regional ware house of Central Medical Services Society, Guwahati resulting in low stock position for short period of time. In such situation of ART drug shortages, they stated that they manage by inter re-location of drug within the ART centres as well as interstate relocation and also by locally procuring these medicines to ensure that such shortage is taken care of.

Since stock out situations have been reported at the ART Centres in the DHs despite these measures taken, DH Administration needs to ensure availability of ART drugs at the treatment centres and this will adversely impact the treatment of people living with HIV.

Conclusion

The State had detected 5,875 cases with HIV during 2014-15 to 2018-19 out of which 1,199 cases were found in sampled DHs. No dedicated doctor was provided to ART center at DH Chandel. One Lab technician is shared between DH Chandel and DH Thoubal. Some ART Medicines issued to DH Chandel are very old and sometimes a few months away from being expired at the time of issue to DH. Out of 20 types of drugs being supplied to the ART centres by the Manipur AIDS Control Society, there were shortage of 12 drugs during the period from 2014-15 till February 2020. In spite of being requisitioned by the ART centres, uninterrupted supply of drugs was not ensured resulting in shortages, and ART drugs being rationed to the patients.

Recommendations

i. *The State Government may take steps to post dedicated HIV/AIDS medical and paramedical staff at ART centres.*

ii. *The State Government may take steps to provide adequate drugs at district ART Centres, by coordinating better with the Central depot for ART medicines supply.*

(JOHN K. SELLATE)
Principal Accountant General (Audit), Manipur

Imphal
The 15 March 2021

Countersigned

(GIRISH CHANDRA MURMU)
Comptroller and Auditor General of India

New Delhi
The 30 March 2021

APPENDICES

Appendix I - Availability of Maternal Health Services

(References Paragraph No. 6.1.11.1)

Sl. No.	Name of Service	Availability of Maternal Health Services			
		DH Bishnu-pur	DH Chandel	DH Chura-chandpur	DH Thoubal
1	Pregnancy testing	Yes	Yes	Yes	Yes
2	Antenatal care	Yes	Yes	Yes	Yes
3	Intra natal care	Yes	Yes	Yes	Yes
4	Normal deliveries by SBA (Partograph, AMTSL, etc)	Yes	Yes	Yes	Yes
5	Pre-referral management for obstetric emergencies (Eclampsia, PPH, shock)	Yes	Yes	Yes	Yes
6	Postnatal care–24–48 hours stay post–delivery	Yes	Yes	Yes	Yes
7	Immediate newborn care – drying, warming, skin to skin contact	Yes	Yes	Yes	Yes
8	Initiation of Breastfeeding	Yes	Yes	Yes	Yes
9	Post-partum contraceptive counseling	Yes	Yes	Yes	Yes
10	Assisted vaginal deliveries	Yes	Yes	Yes	Yes
11	Management of complications other than those requiring referral to L3 including blood transfusion or surgery	Yes	Yes	Yes	Yes
12	Episiotomy and suturing	Yes	Yes	Yes	Yes
13	Stabilization of obstetric emergencies and referral to L3 wherever required	Yes	Yes	Yes	Yes
14	Antenatal steroids for preterm labour	Yes	Yes	Yes	Yes
15	HIV screening	Yes	Yes	Yes	Yes
16	48 hours stay post delivery	Yes	Yes	Yes	Yes
17	Comprehensive abortion care	Yes	Yes	Yes	Yes
18	Case management of RTI/STI	Yes	Yes	Yes	Yes
19	Antibiotics for preterm or PROM for prevention of sepsis of newborns	Yes	Yes	Yes	Yes
20	Comprehensive management of all obstetric emergencies, eg, PIH/eclampsia, sepsis, PPH, retained placenta, shock, obstructed labour, severe anemia	Yes	Yes	Yes	Yes
21	CS and other surgical interventions	Yes	Yes	Yes	Yes
22	Blood bank/storage center	Yes	No	Yes	Yes
23	Blood grouping and cross-matching	Yes	Yes	Yes	Yes
24	Link ART/ART at District Hospital	Yes	No	Yes	Yes
25	PPTCT services	Yes	Yes	Yes	Yes
26	Delivery of HIV positive women	Yes	Yes	Yes	Yes

Appendix II - Availability of Essential Drugs and Consumables under JSSK

(References Paragraph No. 6.1.12.1)

(A) - Availability of Essential Drugs for Intra-partum Normal Delivery under JSSK in District Hospitals

Sl. No.	Name of the Drugs	Churachandpur DH	Chandel DH	Thoubal DH	Bishnupur DH
1	Capsule Ampicillin – Ampicillin Trihydrate IP eq. to ampicilloin 500 mg	Not available	Not available	Not available	Available
2	Inj Gentamycin – Gentamycin sulphate IP eq. to gentamycin 40mg/ml; 2 ml in each vial	Not available	Not available	Not available	Available
3	Ampicillin Injection – Ampicillin Sodium IP eq. to Ampicillin anhydrous 500 mg/vial	Available	Available	Not available	Available
4	Cap Amoxycillin – Amoxycilline Trihydrate IP eq. to amoxycilline 250 mg	Available	Available	Not available	Available
5	Tab. Metronidazole – Metronidazole IP 400 mg	Available	Available	Not available	Available
6	Tab. Nitrofurantoin – IP 100 mg	Not available	Not available	Not available	Not available
7	Cap Doxycycline – Doxycycline Hydrocloride IP eq. to Doxycycline 100 mg	Not available	Not available	Not available	Available
8	Inj. Methylergometrine – Methylergometrine maleate IP, 0.2 mg/ml; 1 ml in each ampoule	Not available	Not available	Not available	Available
9	Tab. Misoprostol – Misoprostol IP 200 mcg oral/ vaginal	Not available	Available (Delivery kit)	Not available	Available
10	Tab. Dicyclomine, 500 mg oral tab	Not available	Available	Not available	Available
11	Inj. Magnesium sulphate - Magnesium sulphate IP 50% w/v; 10 ml vials, containing 5 gm in total volume	Not available	Not available	Not available	Available
12	Inj. Oxytocin – Oxytocin IP 5.0.I.U./ml; 2 ml in each ampoule	Available	Available	Not available	Available
13	Inj. Hyoscine Butyl Bromide 20 mg in 1 ml ampoule	Not available	Not available	Not available	Not available
14	Tab. Hyoscine Butyl Bromide 500 mg	Not available	Not available	Not available	Not available
15	Menadione injection (Vitamin K3) – Menadoine USP 10 mg/ ml; 1 ml in each ampoule	Not available	Not available	Not available	Not available
16	Compound sodium lactate IV injection IP (Ringers lactate) – 0.24% v/v of lactic acid (eq. to 0.32% w/v of sodium lactate), 0.6% w/v sodium chloride, 0.04% w/v Potassium chloride and 0.027% w/v Calcium chloride; 500 ml in each plastic bottle.	Available	Not available	Not available	Available

Sl. No.	Name of the Drugs	Churachandpur DH	Chandel DH	Thoubal DH	Bishnupur DH
17	Sodium chloride IV injection – sodium chloride IP 0.9% w/v; 500 ml in each plastic bottle	Available	Available	Not available	Available
18	Dextrose IV injection, IP – dextrose eq. to dextrose anhydrous 5% of w/v, 500 ml in each plastic bottle	Available	Available	Not available	Available
19	Sodium bicarbonate, IV injection – sodium bicarbonate IP 7.5% w/v; 10 ml in each ampoule	Not available	Not available	Not available	Not available
20	Sterile water for injections, IP – 5 ml in each ampoule	Available	Not available	Not available	Available
21	Inj. Calcium gluconate, 1 gm, IV – 10 ml amp containing 10% calcium gluconate	Available	Not available	Not available	Available
22	Tab Drotavarine 500 mg	Not available	Not available	Not available	Not available
23	Providone iodine ointment, IP containg Providone iodine, IP 5% w/w; 15 g in each tube	Available	Available	Not available	Available
24	Inj. Lignocaine hydrochloride IP 2% w/v; 30 ml in each vial for local anaesthesia	Available	Available	Not available	Available

(B) - Availability of Essential Consumables for Intra-partum Normal Delivery under JSSK in District Hospitals

Sl. No.	Name of the Consumable	Churachandpur DH	Chandel DH	Thoubal DH	Bishnupur DH
1	Absorbent cotton IP 1kg/roll	Available	Available	Not available	Available
2	Providone Iodine solution	Available	Available	Not available	Available
3	Disposable examination Gloves latex free size, 6.0, 6.5, 7.0	Available	Available	Not available	Available
4	Surgical gloves sterile BIS size 7.5	Available	Available	Not available	Available
5	Hypodermic syringe for single use BP/BIS, 5 ml, 10 ml, 20 ml	Not available	Available (only 5 ml)	Not available	Available
6	Hypodermic needle for single use BP/BIS, gauze 23 and 22	Not available	Available	Not available	Available
7	Cotton bandage- each bandage of 7.6 x 1 m	Not available	Available	Not available	Available
8	Absorbent gauze	Not available	Available	Not available	Available
9	Surgical spirit, BP 500 ml in each bottle	Not available	Not available	Not available	Available
10	Infusion equipments BIS, IV set with hypodermic needle, 21 G of 1.5 inch length	Not available	Not available	Not available	Available
11	Intra- cath cannulas for single use (Intravascular catheters) BIS auze 18, length – 45 mm, flow rate 90 ml per minute gauze 22, length – 25 mm, flow rate 35 ml per minute	Not available	Available	Not available	Not available

Sl. No.	Name of the Consumable	Churachandpur DH	Chandel DH	Thoubal DH	Bishnupur DH
12	Chromic Catgut – No. 1 o round body needle	Not available	Available	Not available	Available
13	Cord clamp	Not available	Not available	Not available	Available
14	Mucus sucker	Not available	Available	Not available	Available
15	Medicated soap	Not available	Not available	Not available	Available
16	K -90, Plain Catheter	Available	Available	Not available	Available
17	Foleys catheter, 16 No. BIS, self retaining catheter	Available	Available	Not available	Available
18	Sanitary napkins (2 pkts per case)	Available	Not available	Not available	Available

(C) - Availability of Essential Drugs for Intra-partum C-Section Delivery under JSSK in District Hospitals

Sl. No.	Name of the Drugs	Churachandpur DH	Chandel DH	Thoubal DH	Bishnupur DH
1	Inj. Metronidazole – Metronidazole IP 5 mg/ml; 100 ml in each bottle	Not available	Not available	Not available	Available
2	Inj. Gentamycin – Gentamycin sulphate IP eq. to gentomycin 40 mg/ml; 2 ml in each vial	Not available	Not available	Not available	Available
3	Inj. Cefotaxime – Cefotaxime sodium IP 1 gm per vial	Available	Available	Not available	Available
4	Inj. Cloxacillin – Cloxacillin sodium IP eq. to Cloxacillin 500 gm/ vial	Not available	Not available	Not available	Not available
5	Inj. Oxytocin – Oxytocin IP 5.0.I.U./ml; 2 ml in each ampoule	Available	Available	Not available	Available
6	Inj. Sensorcain, containing Sensorcain IP 0.5 mg	Not available	Not available	Not available	Not available
7	Inj. Lignocaine hydrochloride IP 5% w/v; lignacaine hydrochloride 50 mg/ml with 7.5% dextrose hyperbaric (heavy), 02 ml in each ampoule hyperbaric for spinal anaesthesia	Not available	Not available	Not available	Not available
8	Inj. Lignocaine hydrochloride IP 2% w/v; 30 ml in each vial for local anaesthesia	Available	Available	Not available	Available
9	Inj. Promethazine, IP Promethazine hydrochloride 25 mg/ml; 2 ml in each ampoule	Not available	Not available	Not available	Available
10	Inj. Declofenac, 25 mg in 3 ml	Not available	Not available	Not available	Available
11	Compound sodium lactate IV injection IP (Ringers lactate) – 0.24% v/v of lactic acid (eq. to 0.32% w/v of sodium lactate), 0.6%	Not available	Not available	Not available	Available

	w/v sodium chloride, 0.04% w/v Potassium chloride and 0.027% w/v Calcium chloride; 500 ml in each plastic bottle.				
12	Sodium chloride IV injection – sodium chloridevIP 0.9% w/v; 500 ml in each plastic bottle	Not available	Available	Not available	Available
13	Dextrose IV injection, IP – dextrose eq. to dextrose anhydrous 5% of w/v, 500 ml in each plastic bottle	Not available	Available	Not available	Available
14	Inj. Sodium bicarbonate, IV injection – sodium bicarbonate IP 7.5% w/v; 10 ml in each ampoule	Not available	Not available	Not available	Not available
15	Menadione injection (Vitamin K3) – Menadoine USP 10 mg/ ml; 1 ml in each ampoule	Not available	Not available	Not available	Not available
16	Inj. Pentazocine Lactate IP, Pentazocine Lactate, IP eq. to Pentazocine 30 mg/ml; 1 ml in each amp.	Not available	Not available	Not available	Available

(D) - Availability of Essential Consumables for Intra-partum C-Section Delivery under JSSK in District Hospitals

Sl. No.	Name of the Consumable	Churachandpur DH	Chandel DH	Thoubal DH	Bishnupur DH
1	Absorbent cotton IP 1kg/roll	Data not provided	Available	Not available	Available
2	Providone Iodine solution	Data not provided	Available	Not available	Available
3	Sticking plaster (surgical tape) – 2.5 cm x 9.1 cm	Data not provided	Available	Not available	Available
4	Hypodermic syringe for single use BP/BIS, 5 ml, 10 ml, 20 ml	Data not provided	Available	Not available	Available
5	Hypodermic needle for single use BP/BIS, gauze 23 and 22	Data not provided	Available	Not available	Available
6	Foleys catheter, 16 No. BIS, self retaining catheter	Data not provided	Available	Not available	Available
7	Infusion equipments BIS, IV set with hypodermic needle, 21 G of 1.5 inch length	Data not provided	Available	Not available	Available
	Intra- cath cannulas for single use (Intravascular catheters) BIS auze 18, length – 45 mm, flow rate 90 ml per minute gauze 22, length – 25 mm, flow rate 35 ml per minute gauze 20, length – 33 mm, Gauze - 16	Data not provided	Available	Not available	Available
8	Chromic Catgut – No. 1 on round body needle, No. 2 on round body needle	Data not provided	Available	Not available	Available

Sl. No.	Name of the Consumable	Churachandpur DH	Chandel DH	Thoubal DH	Bishnupur DH
9	Cord clamp	Data not provided	Available (Delivery kit)	Not available	Available
10	Suction tube	Data not provided	Available	Not available	Available
11	Spinal needle disposable adult as per BIS, 23 Gauze (70 – 90 mm without hub)	Data not provided	Not available	Not available	Available
12	Medicated soap	Data not provided	Not available	Not available	Not available
13	K – 90 Plain Catheter	Data not provided	Available	Not available	Not available
14	Foleys catheter, 16 No. BIS, self retaining catheter	Data not provided	Available	Not available	Available
15	Urobag	Data not provided	Not available	Not available	Available
16	Sponges	Data not provided	Available	Not available	Available
17	Cotton bandage- each bandage of 7.6 x 1 m	Data not provided	Available	Not available	Available
18	Absorbent gauze	Data not provided	Available	Not available	Available
19	Surgical spirit, BP 500 ml in each bottle	Data not provided	Not available	Not available	Available
20	Mucus sucker	Data not provided	Available	Not available	Available
21	Mersilk No. 2-0, 1-0 on cutting needle	Data not provided	Available	Not available	Not available
22	Polyglycolic acid, braided, coated and absorbable, No. 1 on ½ circle round body needle	Data not provided	Available	Not available	Available

(E) - Availability of Essential Drugs for Newborn under JSSK in District Hospitals

Sl. No.	Name of the Drugs	Churachandpur DH	Chandel DH	Thoubal DH	Bishnupur DH
1	Inj. Adrenaline IP - 0.18% w/v Adremnaline tartarate or Adrenaline Tartarate IP eq. to adrenaline 1 mg/ml; 1 ml in each ampoule	Not available	Available	Not available	Available
2	Inj. Amikacin – Amikacin Sulphate IP eq. to Amikacin 100 mg per 2 ml in vials	Not available	Not available	Not available	Available
3	Inj. Aminophylline IP - Aminophylline IP 25 mg/ml in 10 ml ampoule	Not available	Not available	Not available	Not available
4	Inj. Ampicillin IP – Ampicillin Sodium IP eq. to ampicillin anhydrous 250 mg/vial	Available	Available	Not available	Available
5	Inj. Calcium Gluconate IP – 10% w/v calcium gluconate IP in 10 ml ampoule	Not available	Not available	Not available	Available
6	Inj. Dopamine – Dopamine 40 mg/ml; 5 ml in each ampoule	Not available	Not available	Not available	Available

7	Inj. Dextrose IP (I.V. solution) - Dextrose IP eq. to Dextrose anhydrous 10% w/v; 500 ml in each pouch/bottle	Available	Available	Not available	Available
8	Inj. Gentamycin IP – Gentamycin sulphate eq. to Gentamycin 10 mg/ ml; 2 ml in each vial	Not available	Not available	Not available	Not available
9	Inj. Phenobarbitone IP – Phenobarbitone Sodium IP 100 mg/ml; 2 ml in each ampoule	Not available	Not available	Not available	Not available
10	Inj. Phenytoin BP – Phenytoin Sodium IP 50 mg/ml; 2 ml in each ampoule	Not available	Not available	Not available	Not available
11	Inj. Potassium Chloride – 150 mg/ml; 10 ml in each ampoule	Available	Not available	Not available	Available
12	Inj. Sodium bicarbonate IP - Sodium bicarbonate IP 7.5% w/v in 10 ml ampoule	Available	Not available	Not available	Not available
13	Inj. Sodium chloride in IP - Sodium chloride IP 0.9% w/v; 500 ml in each pouch/bottle	Available	Available	Not available	Available
14	Inj. Sterile water for IP – each ampoule containing 5 ml	Available	Not available	Not available	Available

Appendix III- Scarcity of ART drugs

(References Paragraph No. 6.3.3)

Sl. No.	ART Medicine	DH Bishnupur	DH Chandel	DH Churachandpur	DH Thoubal
1	Tab. Zidovudine 60 mg +Lamivudine 30 mg + Nevirapine 50 mg (Tab. ZLN (Paediatric))	May-July 2017	Sept- Nov, 2014	-	Dec 2018 – Jan, 2019
2	Tab. Zidovudine 60 mg +Lamivudine 30 mg (Tab. ZL(Paediatric))	-	Nov- Dec, 2014, Aug – Sept, 2015, June –Aug, 2019	-	Sept-Oct, 2018
3	Tab. Nevirapine 200 mg (Tab. NVP (Adult))	-	-	Oct-Nov 2017	Sept 2019
4	Tab. Nevirapine 50 mg (Tab. NVP (Paediatric))	Sept -Oct 2017, Nov 2019-Jan 2020	March – Nov, 2014	-	-
5	Tab. Abacavir 600 mg + Tab. Lamivudine 300 mg (Tab. AL (Adult)	Sept 2016-April 2017, July 2017	Aug 2015-Jan 2018	-	Sept-Oct, 2019
6	Tab. Abacavir 60 mg + Tab. Lamivudine 30 mg (Tab. AL (Paediatric)	Aug 2016	Feb 2020 (NIL at the time of inspection)	-	-

Sl. No.	ART Medicine	DH Bishnupur	DH Chandel	DH Churachandpur	DH Thoubal
7	Tab. Tenoflovir 300 mg + Tab. Lamivudine 300 mg (Tab. TL (Adult))	-	-	October 2019	-
8	Tab. Lopinavir 200 mg + Tab. Ritonavir 50 mg (Tab. LPV + Rito (Adult))	-	-	January 2020	-
9	Tab. Effavirenz 600 mg (Tab. EFV (Adult))	-	Dec 2015 - Jan 2016	-	-
10	Tab. Effavirenz 200 mg (Tab. EFV Paediatric))	Dec 2017- Feb 2018	Jan 2015	-	Oct-Nov 2018
11	Tab. Atazanavir 300 mg + Ritonavir 100 mg (Tab. ATV + Rito (Adult))	-	-	June 2019	Jun- July 2019
12	Tab. Atazanavir 300 mg (Tab. ATV)	Nov-Dec 2019	Nov-Dec 2019	-	-

GLOSSARY

Glossary of Abbreviations

Abbreviation	Expanded form
ASHAs	Accredited Social Health Activists
AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
ART	Anti-Retroviral Treatment
AERB	Atomic Energy Regulatory Board
BCG	Bacille Calmette Guerin
BMW	Bio-Medical Waste
CBMWTF	Common Bio-Medical Waste Treatment Facilitator
CHCs	Community Health Centres
CMO	Chief Medical Officer
C&AG	Comptroller and Auditor General of India
DPT	Diphtheria, pertussis and tetanus
DHs	District Hospitals
DVDMS	Drug and Vaccine Distribution Management System
ETP	Effluent Treatment Plant
eLORA	e-Licensing of Radiation Applications
ER	Emergency Room
EDL	Essential Drugs List
FNAC	Fine Needle Aspiration Cytology
GoI	Government of India
GoM	Government of Manipur
HLD	High Level Disinfection
HMIS	Hospital Management Information System
IPD	In- Patient Department
ICMR	Indian Council of Medical Research
IPHS	Indian Public Health Standards
IMR	Infant Mortality Rate
IEC	Information, Education and Communication
IDCF	Intensified Diarrhoea Control Fortnight
ICU	Intensive Care Unit
JSSK	Janani Shishu Suraksha Karyakaram
JNIMS	Jawaharlal Nehru Institute of Medical Sciences
MACS	Manipur AIDS Control Society
MNHT	Maternal and Newborn Health Toolkit
MMR	Maternal Mortality Rate
MS	Medical Superintendent
NACO	National AIDS Control Organisation
NHM	National Health Mission
NPCB	National Programme for Control of Blindness
NQAS	National Quality Assurance Standards
NRHM	National Rural Health Mission
NVBDCP	National Vector Borne Disease Control Programme
NER	North Eastern Region
OT	Operation Theatre
OPD	Out-Patient Department
PHCs	Primary Health Centres
RIMS	Regional Institute of Medical Sciences
RTI	Reproductive Tract Infection
SRS	Sample Registration Survey
STI	Sexually Transmitted Infection
SPIP	State Programme Implementation Plans
SCs	Sub-Centres
TT	Tetanus Toxoid
TLD	Thermo Luminescent Dosimeter
UPHCs	Urban Primary Health Centres
WHO	World Health Organization

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